DOCUMENT RESUME

ED 171 222 HE 011 311

TITLE	The Robert Wood Johnson Foundation Annual Report 1978, January 1, 1978 through December 31, 1978.
INSTITUTION	Robert Wood Johnson Foundation, New Brunswick, N.J.
PUB DATE	79
NOTE	64p.; Financial Statements and Secretary's Report not filmed
AVAILABLE FROM	The Robert Wood Johnson Foundation, P.O. Box 2316, Princeton, NJ 08540
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Blacks; Females; Higher Education; Medical Education; Minority Groups; Physicians; *Private Financial Support; Research Projects; Rural Population; *Student Financial Aid; Womens Education
IDENTIFIERS	*Need Analysis (Student Financial Aid); *Osteopathy; Outcomes; *Philanthropic Foundations; *Robert Wood Johnson Foundation NJ

ABSTRACT

The nationwide program of financial aid for students enrolled in medicine and osteopathy, sponsored by the Robert Wood Johnson Foundation, is evaluated. The foundation made scholarship and loan funds available to students with minority backgrounds, to women students, and to students from rural areas. The evaluation study sought to determine whether students selected for financial aid tended to choose generalist careers and subsequent practice in underserved areas, and whether the funds were needed. The decision to support students from minority backgrounds appeared to be leading to the anticipated results, but it was less clear whether support awarded to women and students from rural backgrounds accomplished a similar purpose. Until federal financial support reduced in 1975-76, there was a surplus of aid funds available to students. Specific findings regarding black physicians are presented. Among the study conclusions are the following: targeting on particular groups of students can only modestly change the selection of career and practice location; and external funds to support needy students in schools of medicine and osteopathy are now critically needed. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED171222

The Robert Wood Johnson Foundation Annual Report 1978

January 1, 1978, through December 31, 1978

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

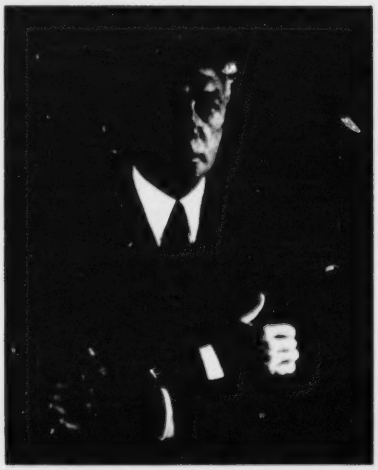
"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Robert Wood Johnson Foundation
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

HE 011 311

The Robert Wood Johnson Foundation
P.O. Box 2316
Princeton, New Jersey 08540

Library of Congress Card Number 73-80807

The Robert Wood Johnson Foundation



The Robert Wood Johnson Foundation is an independent philanthropy interested in improving health care in the United States. It was established in 1936 by General Robert Wood Johnson, who died in 1968.

Robert Wood Johnson devoted his life to public service and to building a family-owned business into a major international corporation. An astute businessman, a statesman, soldier, and patriot, General Johnson devoted much of his life to improving the world around him. He had a tenacity of spirit that enabled him to accomplish many of his goals, but he also planned for the long-range fulfillment of other objectives that could not be achieved in one man's lifetime.

Despite the intensity and determination he displayed in his role as a business leader, General Johnson had a warmth and compassion for those less privileged than he. He was always keenly aware of the need to help others, and during his lifetime, he helped many quietly and without fanfare.

The true measure of General Johnson's deep concern for the needs of others was his decision to leave virtually his entire estate to The Robert Wood Johnson Foundation. With the settlement of this bequest in December, 1971, the Foundation began its transition from a local institution active primarily in New Brunswick, New Jersey, to a national philanthropy.

Trustees and Staff*

Board of Trustees

Robert J. Dixson
Edward R. Eberle
Leonard F. Hill
Philip B. Hofmann
Wayne J. Holman, Jr.
Gustav O. Lienhard
William McC. Martin, Jr.
George H. Murphy
David E. Rogers, M.D.
Norman Rosenberg, M.D.

Trustees Emeriti

John H. Hoagland
Hon. Klemmer Kalteissen
Hon. Dubois S. Thompson

Counsel

John H. Myers
Williams, Myers and Quiggle
Washington, D.C.

Officers and Staff

Gustav O. Lienhard
Chairman of the Board
David E. Rogers, M.D.
President
Walsh McDermott, M.D.
Special Advisor to the President

Margaret E. Mahoney
Vice President
Robert J. Blendon, Sc.D.
Vice President
Leighton E. Cluff, M.D.
Vice President
Terrance Keenan
Vice President for Special Programs
Linda H. Aiken, Ph.D.
Director of Research
Christine Grant
Program Officer
Ruby P. Hearn, Ph.D.
Program Officer
Francis Jones
Program Officer
Martita M. Marx, Dr.P.H.
Program Officer
Thomas W. Moloney
Program Officer
John W. Murphy
Program Officer

**As of February 15, 1979*

Annie Lea Shuster
Program Officer
John L. Simon
Program Officer
Marc Voyvodich
Program Officer
Edward H. Robbins
Program Associate

Frank Karel, III
Vice President for Communications
William E. Walch
Information Services Officer
Eleanor O'D. Nealon
Information Services Officer
Philip J. Gallagher
Librarian

William R. Walsh, Jr.
Vice President and Treasurer
John Thoens
Assistant Treasurer
James L. Crutchfield
Controller

J. Warren Wood, III
Secretary and General Counsel
Olga Ferretti
Assistant Secretary
Catherine E. McDermott
Director of Personnel and Staff Officer

Senior Program Consultants
James A. Block, M.D.
Robert J. Haggerty, M.D.
Kenneth G. Johnson, M.D.
Donald L. Madison, M.D.
Ingeborg G. Mauksch, Ph.D.
John J. Salley, D.D.S., Ph.D.
Carl J. Schramm, J.D., Ph.D.

M. Alfred Haynes, M.D.
Coordinator, Clinical Scholars Program

Contents

The president's statement 8
The 1978 grant program 28
Bibliography 38
Analysis of appropriations: 1972-1978 48
Financial statements 66
Summary of grants 71
Secretary's report 96
Application for grants 98

The president's statement

Do Foundation-supported programs make a difference? A first look.

Seven years have hurried by since The Robert Wood Johnson Foundation moved onto the national scene as a philanthropy devoting its resources to improving the health and medical care of Americans. Our annual reports since 1972 chronicle our evolution. During this period we have made almost 1,100 awards totalling $318.5 million. Many dedicated people using our funds are hard at work bringing their talents to bear on the problems which impede the appropriate distribution of modern medical and dental care to all who need it—particularly those not requiring hospitalization. There are many exciting new things happening in the organization and delivery of health care in the United States.

As also indicated in those same annual reports, early on we decided to underwrite objective external evaluations of our major programs to get a better understanding of how we'l they met their particular objectives. We are now in a position to report on the first four of these evaluations to reach completion. This report describes some of the highlights of those studies, which have closely examined one small segment of our total program.

Our decision to put substantial amounts of money and effort into objective external critiques of our programs was based on a number of considerations. Of primary importance was the belief that before new solutions would be absorbed into the mainstream of American life, a better educated and more sophisticated public would ask for objective evidence that demonstrations launched under Foundation funding were actually helping to reduce the problems at which they were directed. "What difference does it make in the lives of people?" is the tough question asked increasingly by elected officials, those working on national policy, and the public in general. Secondly, it was our belief that impartial, factual data about the effectiveness of particular programs would help answer a criticism regarding foundations as expressed in the Peterson Report of 1970:*

> "Foundations apparently find the process of conceiving or making grants more satisfying and more worthy of their time and resources than evaluating success or failure of these grants, what was learned by them, and the extent to which the results were disseminated to an interested public."

*Commission on Foundations and Private Philanthropy. *Foundations, Private Giving, and Public Policy: Report and Recommendations.* Chicago, University of Chicago Press, 1970.

Last and most obvious, having made the decision to be mission oriented rather than a general purpose foundation, our trustees and staff needed solid, objective information on the programs supported to determine the extent to which they met our hopes.

Since 1972 we have provided $10 million for evaluations of 15 major programs which in the aggregate amount to Foundation grants of more than $150 million. As a general ground rule, if the Foundation invests more than a million dollars in a particular program that is to be conducted at multiple sites, or by multiple groups, a simultaneous evaluation is developed and undertaken. These studies are being conducted by skilled professional groups not themselves responsible for developing or running the programs.

Four major programs launched in 1972 and 1973 have now been concluded. The full evaluation reports and subsequent papers and monographs by those conducting these studies are, or will soon be, available for those who wish to examine the findings in depth.* For now, rather than attempting a true summary of these studies, I would like to share with you the findings which caught my eye and which seem to me the most important on which to base further efforts.

As will be apparent, evaluation of complex programs involving many institutions and many people cannot yet be classified as a precise science. While we are gaining in sophistication in this field, we fully recognize there is no well-tested prescription for how these important assessments of performance should be designed or carried out, but we are attempting to make them more precise and crisp each time.

Here, then, are some of the findings, both positive and negative, which stem from careful examination of these particular Foundation efforts. We still have much to learn, but this is our first harvest. There will be more.

A nationwide program of financial aid for students enrolled in medicine and osteopathy

In 1972 The Robert Wood Johnson Foundation awarded $10 million in grants to increase the amount of student aid monies available to young men and women entering schools of medicine and osteopathy. There was, at that time, federal legislation in place which put enormous pressures on medical schools to increase their output of physicians. However, the data then available suggested that the delivery of health services and the distribution of physicians by specialty or geographic location were not likely to be significantly affected by this increase in numbers unless serious attention was given to the selection of more students who might choose generalist careers or practice in medically underserved areas. After considerable study, we made our scholarship

*For further information, write: Communications Office; The Robert Wood Johnson Foundation; P.O. Box 2316; Princeton, New Jersey 08540.

and loan funds available to students needing financial aid who came from minority backgrounds, to women students, and students from rural areas. The evidence then available suggested that these students tended to choose branches of medicine and practice locations which made it more likely that they would care for people most poorly served in urban and rural areas. Further, there were indications that a change in federal student aid policy was imminent—away from needy students to a much smaller number who would agree to serve tours in doctor-short areas following their training. Consequently, medical educators told us that the amount of student aid funds then available would be insufficient to maintain economically marginal students in school.

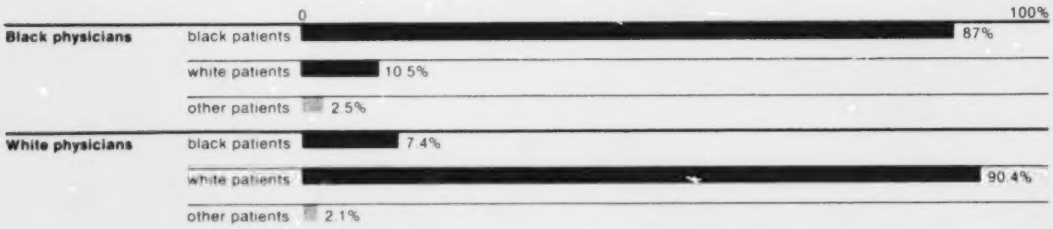
The evaluation was done by the National Planning Association (NPA) in Washington, D.C., which was asked to conduct a study to answer two deceptively simple questions. First, had we selected students who tended to choose generalist careers and subsequent practice in underserved areas? Second, were our funds needed? That is, were they of critical importance in placing young people from these backgrounds in medical or osteopathic schools and keeping them there?

Some of the answers were unexpected. Regarding the question, "Did we pick the right students?" the answers were mixed. Clearly the decision to support students from minority backgrounds seems to be leading to the anticipated results. Whether support awarded women students and students from rural backgrounds accomplishes a similar purpose is less clear.

In making their awards, institutions allocated over 50 percent of our funds to enroll and maintain minority students—predominantly black students—in medical school. Consequently the following findings seem of particular interest.

As shown in Figure 1, the race of office-based practicing physicians is an important determinant of the race of patients that they serve in ambulatory practices. Because medicine is a culturally sensitive area of human interaction, different ethnic groups have always tended

Figure 1 **Race of Practicing Physicians as a Determinant of the Race of their Patients** Source: USPHS, National Ambulatory Medical Care Survey



to seek out physicians from their own culture. But until I saw the results of this study, I was unaware of the degree to which this also occurs along racial lines.

At this point in our history, black doctors serve almost exclusively black patients. However one may feel about this characteristic of current society, it must be kept in mind in planning for medical services. If medical care is to be equitably accessible to all, enlarging the number of black physicians is clearly of critical importance to the welfare of the nation.

The study also showed that black physicians were 26 percent more likely to choose a primary care specialty—family practice, internal medicine, pediatrics—than were young white physicians. Based on knowledge from earlier studies indicating that physicians tend to practice in the same geographic areas where they complete their postgraduate training, Figures 2 and 3 offer some evidence that black physicians are settling in the South, which is a relatively underserved region medically, and are also more likely to locate in large cities where low income minority people are heavily concentrated. Thus an increased supply of black physicians can be viewed as helping to improve the geographic distribution of physicians.

The data on women are less dramatic. Women choose primary care specialties in only slightly greater numbers than physicians in general. While considerably more go into pediatrics—14.5 percent of women in contrast to 5.5 percent of all physicians—fewer go into family or general practice. There is evidence, however, that women do tend to pursue somewhat different careers than their male counterparts. More women physicians are hospital-based and more are salaried—(17 percent versus 8 percent) and a greater proportion of these are in primary care specialties. This suggests that they work in large hospitals

Figure 2 **Change in Black Physicians Training in the South Compared to Black Population in the South**

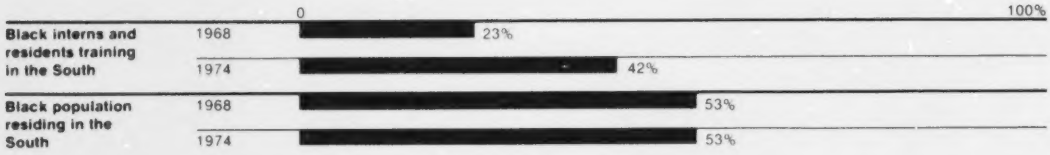
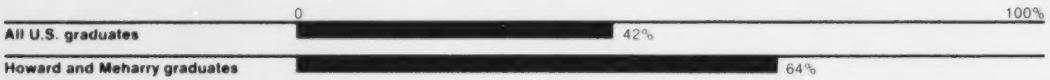


Figure 3 **Recent Medical School Graduates Practicing in Central City Locations, 1975**



which tend to be located in underserved areas where they deliver more general medical care to low-income patients.

The data on students from rural backgrounds are more impressive. The study indicates that over 30 percent of physicians coming from towns of less than 10,000 return to rural practice. This represents a career choice for rural America which is about three times higher than observed among choices of students originally from urban areas.

Regarding the question: "Were our funds needed?" the answer was both no and yes. As shown in Figure 4, popular perceptions to the contrary, there was actually a surplus of aid funds available to students during the first three years of our program. The full financial impact of changes in federal strategies regarding government support of students was not felt during this period. Thus the NPA study showed, in retrospect, that more funds were available than actually required to meet baseline student needs during the period 1972-1975.

However, this situation changed dramatically in 1975-1976. At that time, the federal sector substantially reduced student support on the basis of need and shifted its funds to the development of the National Health Service Corps. The resultant sharp reduction in numbers of students assisted led to a decided problem for students needing financial help. Thus in 1975, the Foundation's funds became critically important, particularly to low income and minority students. Projections shown in Figure 4 suggest the needs have grown even more serious in subsequent years.

Obviously, such aggregate data do not show the differing needs of different schools over time. Some which did not have a surplus of funds in the 1970's benefited enormously from our support, but it seems probable that during the first three years of the program, the target groups of students would have remained in professional schools without our assistance.

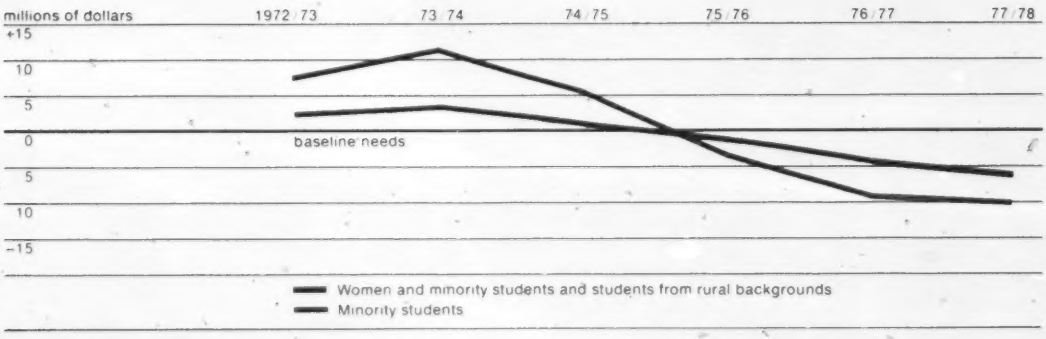
The NPA study included a careful analysis of the relative importance of several other factors in determining the enrollment in medical school for minority and women students. This analysis drew on the findings of student and financial aid officer polls, as well as the insights provided by sophisticated models of the enrollment process. For one thing, the study revealed that financial aid was of less importance than generally believed. For example, special recruitment programs, general social change, and the presence of minority faculty members within a medical school were shown to be more influential for black students than student aid funds in promoting their enrollment. For women as well, programs designed to encourage their entry into medical school coupled with the general change in social attitudes regarding the appropriateness of women engaging in professional careers were said to be of more importance than the availability of student aid.

The evaluators also examined whether the way our funds were awarded was the most efficient use of limited monies to assure student

recruitment and retention. Our program was permissive. Each school could determine both who would receive student aid and how much of that aid would be an outright scholarship gift and how much would be awarded in loans. Here, the NPA study suggests that more of our funds were awarded in scholarships and less in loans than absolutely necessary. Studies of the income production of young physicians—those under 35—show that they move swiftly to incomes of $35,000 to $40,000 yearly after completing training. This represents an extraordinary "return" of 22 percent per annum on the costs of a medical school education—a splendid investment in anyone's terms. Loan pay-backs should therefore present no insurmountable financial problem to most young physicians. Further study has shown that loans can provide almost 10 times more funds than can scholarships if appropriately deployed to the same end. On the basis of these data, in this period of grave shortages of dollars for social purposes, we have moved to a guaranteed student loan program to help offset the serious shortfalls in projected student aid for the years ahead.

In designing the 1972-76 program, we had a choice between giving support to the educational institutions themselves or funding a central agency to deal with individual students. We chose the former route. However, the evaluation suggests that making the awards to student-funding agencies like the National Fund for Medical Education or the United Student Aid Fund would probably have been more appropriate. Wealthier schools with more student aid monies tended to bid up awards to students within the special groups that were already in the pool. This had the unintended side effect of having certain schools with strong recruitment programs giving almost 25 percent more aid to those students than was perhaps necessary. Thus it would appear that

Figure 4 **Medical Student Aid Gaps and Surpluses Relative to Baseline Needs**



student funding agencies would have been able to support larger numbers of needy students with the same philanthropic contribution.

In examining these findings, the dominating influence of federal funding decisions was brought forcefully home to us. In 10 years, federal policy regarding student aid has changed three times: from student aid based on ability, to student aid based on financial need, to the most recent decision of student aid based on subsequent service commitments. We have learned several things from this study.

First, because federal funds are such a large component of medical and osteopathic student aid, philanthropic groups must be very knowledgeable about, and up-to-date on, federal strategies, if they are to play an effective role.

Second, targeting on particular groups of students can only modestly —not dramatically—change the selection of career and practice location.

Third, external funds to support needy students in schools of medicine and osteopathy are now critically needed.

Last, funds made available through guaranteed loan programs seem to be the way of getting the greatest return for monies expended to keep economically deprived students in school, and providing such funds through a central agency dealing directly with students probably distributes philanthropic dollars most broadly and equitably.

A nationwide program to develop regional emergency medical communications systems

In focusing on barriers that Americans encountered in obtaining access to medical care, the difficulty many seemed to be having in getting immediate and appropriate help in emergency medical situations soon caught our attention. In 1973 the Foundation made almost $15 million in awards to 44 sites in 38 states to develop regional emergency medical communications networks. A number of studies had suggested that the technical knowledge required to develop coordinated systems was available, but communities were having trouble getting beyond a variety of jurisdictional and geographic problems.

The value of emergency medical care was not an issue for us. Our concern was getting appropriate emergency services to patients, or patients to the services, with greater speed and effectiveness. We hoped to demonstrate that regionalized programs with inter-jurisdictional coordination could accomplish this objective. The Foundation's program was aimed at encouraging local communities to band together to establish well planned, regional emergency medical communication arrangements to coordinate services and dispatch ambulances throughout relatively large geographic areas or population centers.

Two quite different assessments of this program were conducted. A committee of the National Academy of Sciences composed of experts in all facets of planning and operating emergency medical service

systems, which advised us on the programs, did on-site reviews of all 44 regions. An independent study, conducted by the Rand Corporation, was planned and funded shortly after the start of the program. The Rand study of a sample of preselected sites was designed to assess the effect of full regionalization of emergency services on access to services, on speed of treatment, transfer to appropriate hospitals, and communication between hospitals and personnel in emergency vehicles. We also hoped to get some information on the lifesaving capability of such programs, although this issue was not central to the study.

When planning the Rand Corporation study, the Foundation was early in its development, and our lack of experience in service programs and evaluation alike led us to make several fundamental errors. First, our goals for full regionalization were unrealistically high. Second, the time frame for the conduct of the study was wrong—we started too early and the two-year period of the evaluation was too short. Third, the appeal of the program seemed so great and its advantages so obvious to us, that we expected good data from all programs. Thus only seven of the 44 sites were selected for the Rand study. Although we had made participation in the evaluation a precondition of the grants, neither the grantees nor we were aware how difficult and time consuming it would be to gather data from the multiple groups and organizations comprising regional emergency medical service systems. This resulted in three of the seven sites having such incomplete data that they were excluded from the final analysis. In retrospect, we expected too much, we looked too soon, and the sites were too few in number to obtain solid answers to the questions of most compelling interest to us.

Within the preselected sites studied by Rand, regionalization as measured by any rigorous criterion such as cross-county ambulance runs, or assignment of hospital destination based on matching a patient's problems with institutional capacity, simply did not occur during the period of the study. In the absence of full regionalization—perhaps an unrealistic goal—the Rand group was unable to determine whether such coordinated services could make the differences we had predicted would occur.

However, the Rand study did show that the Foundation funds had brought together the various aspects of emergency services operated under different geographic and institutional jurisdictions in new administrative arrangements. Four years later, the on-site reviews conducted by the National Academy of Sciences also indicated that by this time the majority of regions were effectively operating multi-jurisdictional programs.

The Rand study had some other interesting findings. First, it was clear in the seven regions studied that access to emergency care prior to launching the program was not as deficient as thought. Despite the complex nature of arrangements regarding notification of emergencies,

dispatch of ambulances and the like, people seemed to be getting to care more promptly than was commonly supposed. However, problems in tracking those who tried to get, but failed to receive, emergency care makes this observation less certain than one would wish, although from what we can ascertain this group is very small.

The most important finding of the Rand study with respect to planning future strategies was the critical importance of the kind and extent of medical training of those who staff ambulances. One of the hopes of the program was to improve direct communications between ambulance attendants and expert physicians in the hospital so that patients would be properly managed during the critical moments between the medical catastrophe and arrival at the hospital.

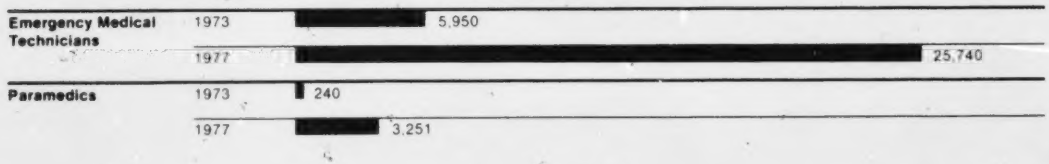
The Rand study clearly showed that it required the presence of highly trained paramedics, who can administer definitive care in the ambulance, for such communications to occur. There was far less communication with emergency medical technicians (EMT's), who receive less training and can stabilize patients but not give definitive care.

As an example, in San Bernardino County, California, where the implementation of ambulance-to-hospital communications was accompanied by training of large numbers of paramedics, physicians prescribed treatment for 65 percent of severe cases en route when a paramedic and an EMT were in the ambulance together, but in only seven percent of such cases when the lesser-trained EMT was aboard alone. These data are summarized in Figure 5. The Rand research suggests the development of paramedic-EMT teams as a possible next important step in improving emergency medical care.

The value of such communications—and notification of the hospital of the nature and the severity of the problem being brought to it—

Figure 5 **Ambulance Staffing as a Determinant of Physician-Ambulance Communication When Transporting 'Severe' Medical Problems**

Figure 6 **Number of Trained Personnel in the 44 Regions of the Foundation's Emergency Medical Services Program**



was borne out in yet other ways by the Rand study. It was shown that pre-notification increases the chances that the patient will be seen by a physician, that the physician will be present in the emergency room when the patient arrives, and sharply cuts the delay in treatment—from 27.3 minutes to 10.7 minutes in the region examined.

The National Academy of Sciences observations showed that the Foundation-supported programs trained large numbers of new emergency medical personnel. These data are shown in Figure 6. The Rand findings suggest that it may be wise to shift the emphasis of future training to include larger numbers of paramedics.

As shown in Figure 7, the first step in regionalization—progress toward centralization of responsibilities and agreement on a central telephone number—was satisfactorily accomplished in most regions by the end of four years. But while the number 911 provides the easiest telephone access to emergency services, the Rand findings underscore how difficult this changeover is to implement at the local level.

As noted in Figure 8, there were also marked improvements in the communications linking ambulances to hospitals and the linking of central medical emergency dispatchers with fire departments, police

Figure 7 **Simplifying Public Access to Emergency Service in the Foundation's 44-Region Program**

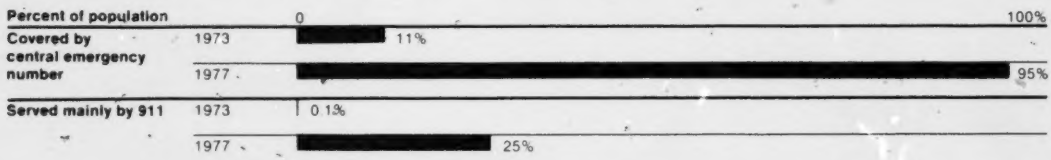
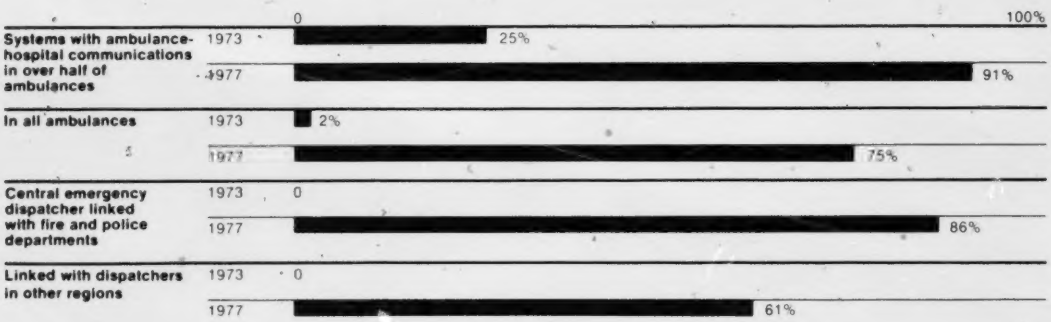


Figure 8 **Improving Communication Linkages Between Ambulances and Hospitals, and Between Dispatchers in the Foundation's 44-Region Program**



departments, and other dispatchers in other regions. These seem clear evidence of improvement in multi-jurisdictional linkages.

Because of the design of the Rand study and the early recognition of the complexity of such an evaluation, we are unable to answer the question of greatest interest to all: do regionalized programs save more lives? Here we have only softer data, much of it anecdotal, supplied from the regions themselves. But such as it is, it seems to point in the right direction. Data from the city of Newark, New Jersey, comparing deaths in control areas in which the coordinated system was not in place with those in which it was, suggest that deaths from accidents and those produced by motor vehicles were significantly decreased. In Newark the program was able to drop the response time from notification to on-site management of emergencies by almost 50 percent. Bits and pieces of data from other areas—Florida, East Lansing, Peoria and other regions—also suggest greater lifesaving capacity when coordinated systems are in place, but the data lack rigor and control.

There are, however, some figures emerging that deserve mention. A series of papers from the Seattle project* demonstrates the value of paramedics in saving individuals who have undergone cardiac arrest—an all too common event synonymous with death in years past.

In a two-year period in the Seattle emergency medical service region, EMT's cared for 301 individuals with cardiac arrest. Six percent of these patients were subsequently discharged alive from the hospital. In contrast, of 569 receiving treatment from paramedics, 20 percent went home and have been similarly followed. Their composite studies indicate that an individual with cardiac arrest is 4.4 times more likely to survive if treated by a paramedic. The findings suggest that paramedic services have a small but measurable effect on the community's cardiac mortality rate: a drop of 1.3 percent if managed by EMT's; a drop of 8.4 percent if a paramedic is in attendance.

Review of these papers shows quite dramatically the "why" for this striking difference in outcome. The paramedic, unlike the EMT, is trained to give definitive care for cardiac arrest, and it is the *time* which elapses between the event and (a) cardiopulmonary resuscitation, plus (b) definitive treatment (restoring normal heart rhythm or re-starting the heart) that makes the critical difference.

As shown in Figure 9, if cardiopulmonary resuscitation (CPR) was started within four minutes, and definitive treatment given within eight minutes, 51 percent of these "dead" patients were subsequently

---

*Eisenberg, Mickey; L. Bergner and A. Hallstrom. "Paramedic Programs and Out-of-Hospital Cardiac Arrest: I. Factors Associated With Successful Resuscitation" and "II. Impact on Community Mortality." *American Journal of Public Health*, 69(1):30-42, January, 1979.

Bergner, Lawrence; M. Eisenberg and A. Hallstrom. "Evaluating Emergency Medical Services: Quasi-Experimental Outcome Studies." *Evaluation and the Health Professions*, scheduled for publication in March, 1979.

discharged alive from the hospital. If *both* time periods were exceeded, only five percent survived to return home.

These important studies suggest all kinds of new strategies for those concerned with emergency medical care. Training laymen to administer CPR was shown to have an important positive effect on outcome, and Seattle launched a large community program to do just this. Plans for recasting the training of emergency personnel to permit earlier treatment of the arrest is suggested in communities where these skills can be appropriately utilized. We need more such studies.

So these are the results of this program to date. Not as dramatic as we had hoped, but nevertheless encouraging. Obviously our program did not start from scratch. Most American communities have ways of delivering medical services in emergencies; hence problems of access were not as great as we had believed. The voluntary efforts of communities to develop these complex systems cannot be evaluated over a short time frame, and completely regionalized systems are harder to put together than we had originally thought. Getting communities to organize central dispatching services, to share ambulance services across city, county or other political boundaries, and the myriad of other details required are long-term propositions. But the federal sector has now launched a much larger effort, and we have been the catalyst for a program which looks promising.

Most encouraging, the National Academy of Sciences report suggests a continuing commitment to the program. Over 75 percent of the regions are now self-sustaining financially and have broad public acceptance and support.

Strengthening the role of state legislatures in improving American health care

In 1973 a number of federal mandates were placing sudden, massive, and different responsibilities for health legislation at the state level. Aggregate state spending for health had risen from $3.5 billion in 1965 to $15.9 billion in early 1974—largely for Medicaid programs—and accounted for the largest percentage increase in any state budgetary item during this decade. Where state legislatures had previously dealt largely with public health matters, in 1973 they were playing an increasingly key role in personal health and medical affairs.

Figure 9 **Percent of People Discharged Alive From the Hospital Following a Sudden, Out-of-Hospital Cardiac Arrest**

Cardiopulmonary resuscitation	< 4 minutes	> 4 minutes	< 4 minutes	> 4 minutes
Definitive care	< 8 minutes	< 8 minutes	> 8 minutes	> 8 minutes
Survival to hospital discharge	51%	25%	15%	5%

The federal government, recognizing this growing and changing role of states in health was concentrating on developing new administrative structures, like planning agencies, to help states deal more effectively with health and medical issues.

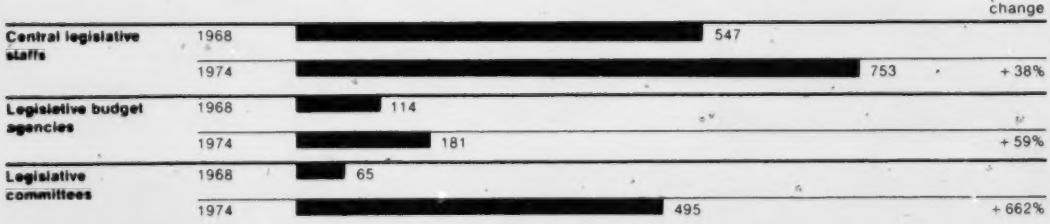
On the other hand, the Citizens' Conference on State Legislatures (now named Legis 50) believed, and we agreed, that for legislators to deal intelligently with this avalanche of new responsibilities, the various committees of state legislatures dealing with specialized areas of knowledge required better staffing. It was our reasoning that with so many federal health programs being transferred to states, it would help to have competent professional staff working with policymakers to lay plans in health areas before, rather than after, public programs were implemented. This followed a trend: as shown in Figure 10, state legislatures were rapidly increasing the number of professional staff to help them make difficult and complex policy and priority decisions in all legislative areas.

In late 1973 and early 1974, the Foundation allocated $2 million to allow selected states to recruit and hire professionally qualified health experts to staff standing committees on health. Our 15-member advisory committee tried to pick states that varied widely in the staffing patterns of their legislatures, in geography, and political outlook.

Of the eight states initially awarded grants for two years, only four were able to genuinely implement the staffing, and their support was continued for an additional two years. A group at Georgetown University undertook to study both the funded states and a series of control states to determine the impact of the program. As it turns out, this study represents the largest ever undertaken about the effects of committee staffing on state legislative processes. The study made use of state data and the results of interviews with over 600 individuals, including state legislators, state government officials, personnel in various health agencies, lobbyists for groups concerned with health issues, members of the press, and many others.

Again, we were trying to answer some deceptively simple questions.

Figure 10 **Number of Professional Staff Working With State Legislatures in the United States**



First, did the presence of professional staff improve legislative performance in the health area? Second, was the decision-making of state legislators sounder, better informed and more independent? Third, did the public feel it had more input to the decision-making process about matters affecting health and medical care? Lastly, if the answers to the first two questions were yes, would other states adopt professional staffing for their health committees?

The evaluation suggests that the presence of qualified professional staff did, indeed, make a difference in overall health policy legislative performance. As shown in Figure 11, the number of legislators who rated their state legislatures' ability to handle health issues as good or very good was significantly greater in the model staffing states than in states lacking such professional assistance. Also, as shown in Figure 12, the presence of specialized staff in health markedly increased the amount of health legislation and the allocation of resources to the health area, although whether this is a plus or a minus depends on one's point of view. There was also considerable agreement that professional staff improved the capacity of the legislature for independent policy making. Ninety-three percent of state legislators in the funded states reported that the model staffing program had made them more knowledgeable about health issues, less reliant on information supplied by special interest groups, and more open to the concerns of individuals and groups who did not earn a living from working on health matters.

Clearly a professional staff increased the accessibility of the legislative process to consumers and other groups in ways that seemed both

Figure 11 'Good' and 'Very Good' Ratings Given to Legislatures for Their Ability to Handle Health Issues

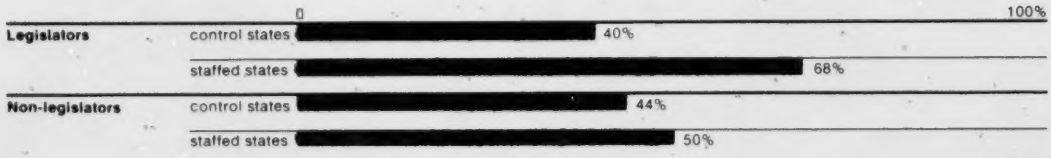
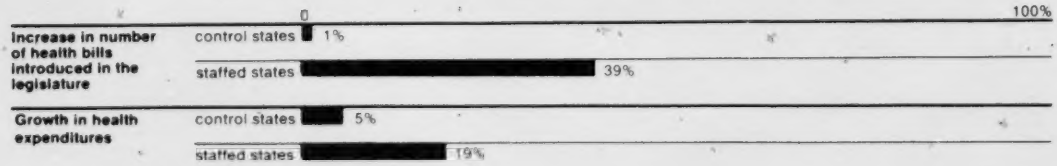


Figure 12 Changes in Legislative Health Activity During Staffing Program

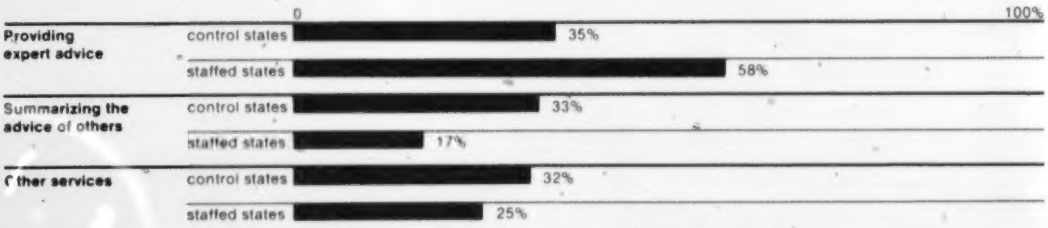


sound and democratic—over 60 percent of all respondents representing the public believed the programs had helped increase their access to the legislative process when compared with previous years. There was greater public input to the process brought about through greater numbers of scheduled public hearings, and greater availability of information on various bills. Even 82 percent of the press—a notably tough-minded and critical group—felt that the presence of specialized staff helped them improve their coverage of health issues. Since public confidence in being able to reach political institutions is a major tenet underlying our democracy, this finding seems gratifying.

It was also apparent that professional staff in the health area provided a different type of service to legislators than traditional generalist staffing. As noted in Figure 13, the single most important service appeared to be the provision of expert advice of an independent nature. Legislators were required to rely less on summaries of the advice of others, and this appeared to contribute to legislative independence. When asked during the final round of interviews if the quality of legislation had been improved, 87 percent of those in states receiving four-year support answered yes.

On the last question—namely, if the program appeared to be effective, would other states adopt it—the answers were mixed. None of the states supported continued it for their health committees or adopted this model of specialized committee staffing for other standing committees. Although all agreed that the program had been highly effective, it was not possible to continue staff in the health area without doing the same in others, and that was precluded by funding constraints. Be that as it may, the results suggest that providing specialized staff to state legislatures may be a powerful way of improving a state's capacity to deal with complex matters in the area of health. The program was of sufficient broad general interest that eleven other states adopted the committee-staffing concept, making use of federal and other foundations' monies to implement their new staffing programs, and the concept is of increasing interest in many states.

Figure 13 **The Single Most Important Service Provided by Staff: The Opinion of Legislators**



In summary, the basic worth of offering hardworking state legislators professional assistance in an area as complex and controversial as health seemed confirmed—it worked very well. Other states paid close attention, a number adopted the concept, and it was generally agreed that legislation was improved. As with the emergency medical services program, it was clearly apparent that changes do not take place overnight, even when judged as highly effective, especially when they involve anything as fundamental as how states govern themselves. Nevertheless, it is an idea viewed very positively by state legislatures, and it is receiving continuing study.

Primary care residency training programs in internal medicine and pediatrics

As soon as agreement on the Foundation's principal objectives was reached in 1972, our attention was directed to how we might help slow or offset the dwindling supply of physicians delivering general out-of-hospital care—primary care, as we termed it. In the early 1930's, almost 70 percent of our physician population were generalists, but by 1972 this had dropped to 28 percent in a steady, continuing decline. Since 1973, in an effort to correct this trend, the Foundation has funded nine academically based primary care residency programs in internal medicine and pediatrics for a total outlay of $10.7 million.

Physicians considered to be most involved in delivering primary care include family practitioners, internists, pediatricians and sometimes obstetrician-gynecologists. All routes appear appropriate. However, as we began our efforts, the federal sector and a number of states had made the decision to encourage growth in family practice through heavy subsidies for residency training programs in that field. The number of such programs has rapidly and steadily expanded since that time. But it was our belief that simply going this one route might not correct the national imbalance in numbers between primary care and specialty physicians. We felt that even with this expansion in family practitioners, the need for primary care could not be met in the foreseeable future by this group of physicians alone. Further, faculty required for training family practitioners were not generally available in medical schools—and we are supporting efforts to remedy this—so internal medicine and pediatrics will continue to be major sources of physicians who give generalist care. Thus the Foundation's funds for primary care training of physicians have gone to help academic centers to develop generalist training and careers in internal medicine and pediatrics, as contrasted with the traditional emphasis in these specialties on subsequent subspecialty pursuits.

In conjunction with the federal sector, we have funded two studies. One, focusing on these nine residency programs, conducted at the University of California in San Francisco (UCSF). The other is being carried out at the University of Southern California (USC).

There were three principal questions toward which the studies were directed. First, did the internists and pediatricians trained for generalist roles compare favorably in their clinical skills with more traditional internal medicine and pediatric residents headed for subspecialty training and careers? Second, did the program run the hazard of developing a shallow physician who was less able to manage patients requiring more complex in-hospital care? Third, were primary care residency graduates more likely to provide generalist types of care in places where it was most needed?

Satisfactory answers to questions one and two have been obtained by the UCSF study. A major finding of this study, based on a careful review of the performance of 163 residents in training during the years 1976 and 1977, was that residents in internal medicine and pediatrics programs emphasizing primary care are judged every bit as good as those in traditional internal medicine or pediatric residencies as measured by their National Board scores, the assessment of their peers and teachers, and the quality of the medical schools in which they had received their undergraduate training. In sum, these young men and women could have competed successfully for any kind of residencies, but chose this new and broader career route.

The study shows that the mean scores for primary care residents on national exams administered by the National Board of Medical Examiners were the same or slightly higher in the areas of basic science knowledge, clinical science information, and clinical performance. A careful survey of judgments of medical school faculty, departmental chairmen, fellow residents, and other professionals with whom they worked—nurse practitioners and physicians' assistants—yielded confirmatory information. Seventy-seven percent of these respondents thought that the primary care residents had clinical skills equal to or better than traditional internal medicine residents. They were thought to be equally or more knowledgeable in the science of medicine by 71 percent, and even equally or more interested in clinical research by 50 percent. Perhaps more gratifying, 93 percent of the respondents believed that the young men and women who received special primary care training were equally or more socially oriented than their straight internal medicine counterparts.

The last and most important question—do physicians with such training practice differently or in different sites—cannot yet be answered. They are still making their career choices. It will, however, be addressed by the USC study, which is just beginning to bear fruit. This is a careful national examination of what physicians actually do in practice. The study is documenting the number and kinds of patients cared for by over 10,000 physicians in 24 specialties in their regular practice worlds. This study will, I believe, finally give all of us real data on which to make judgments about who actually delivers primary care services. An identical follow-up study will collect similar data on

graduates of our primary care residencies after at least three years in practice. Comparison of the practice patterns of this new group with the baseline information obtained from practicing physicians who received more traditional training should determine whether those trained for primary care do opt for different practice careers or merely bear a new label.

One finding in the completed UCSF study bears watching. About one-fourth of the primary care residents indicated that they planned a fourth year of residency training in a subspecialty area. Thus it is possible that these particular individuals may be lost to primary care practice. Our ongoing study should also answer this question.

Epilogue

These, then, are the fruits of our initial forays into evaluating programs. They have given us valuable insights and have, I believe, produced some unexpected information of value to health policymakers and others working to improve our American ways of delivering general medical care. We, at least, have certainly made use of the findings in shaping our more recent programs.

The reasons such evaluations are not often carried out are also increasingly evident to us. They require extraordinary care in their design and implementation if one is to answer genuinely significant questions. The tools used in assessment of complex programs involving many people and institutions are imperfect, data collection is enormously time consuming, such studies require continuing attention and patience to keep them on track, and their costs are at first—and sometimes in the end—startling.

The evaluations also vividly illustrate that one simply cannot assess the effectiveness of many major new ideas in less than five years—and probably many new ventures require more like a decade to determine their effect. There are few institutions today which can make such long-range commitments.

In some instances, our enthusiasm, impatience, and curiosity to know whether our programs have or have not been successful have led us to try to obtain data too early. Such impatience runs the hazard of a premature "evaluation" actually being harmful to the gestation of a new idea—witness the downbeat conclusions of the Rand study based on data collected only 18 months after the grants were made.

However, despite the difficulties, we remain convinced that in today's world, careful evaluation studies are increasingly important. The studies highlighted here have heightened our awareness that things are not always as they seem, and solid data, not anecdotes, are needed for proper decision making. They can, for example, show that individual assessments of the severity or magnitude of a problem may be grossly in error—witness the perceived desperate need for student aid funds in 1973 as viewed by the deans of individual medical schools.

Public policy decisions in health are increasingly difficult and expensive. Although there will never be *enough* information available, we must try to bridge the most important gaps in our knowledge. In addition, there are very different perceptions of the value of foundation activities or foundation-initiated programs by both the private and public sectors, and foundations need tough-minded and pragmatic documentation of the worth of their efforts carried out by trained, objective third parties. I wish we had equally rigorous evaluations of many public-sector programs.

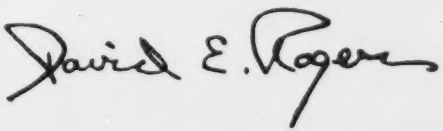
At the time of this writing, we have three fundamental perceptions about foundation efforts directed at obtaining independent evaluations of the value of particular programs foundations assist.

First, we have partially satisfied ourselves that it is feasible for private foundations to use reasonably systematic and objective techniques to evaluate their work. While the tools are often primitive and the results less definitive than one would wish, they nevertheless do permit development of better guidelines and force more critical thinking about areas where conventional belief that one is doing "the Lord's work" can often lull one into avoiding objective assessments of performance.

Secondly, extraordinary patience and forbearance are required. Major new ideas or shifts in ways of doing things involving people and institutions take more time than logic or reason would indicate. One simply cannot expect to see shifts in arrangements which involve new groupings of people or practices at the same rapid rates than often follow the introduction of an impersonal new technology.

Lastly, we have come to the firm conclusion that foundations and others involved in major new programs designed to improve social ills or shortfalls should continue to try to determine the worth of their programs. Improvements in a society as complex as ours are never totally predictable or controllable, and that is not an altogether bad thing. Although painful to admit, conventional wisdom and obvious solutions, and the best of intentions, are sometimes wrong.

But despite the travails of unexpected or disappointing results, and the expense of such studies, there are too many demands for limited resources to permit entrenched opinions or anecdotal evidence to determine the allocation of these precious dollars. To learn by doing and by encouraging new kinds of solutions to old problems seems both right and appropriate—but the learning must be real so that subsequent decisions can be based on evidence made available for all to examine.



The 1978 grant program

The 1978 grant program

During 1978 the Foundation made 108 grants totalling $47.2 million. The types of activities supported and the allocation of funds to each were as follows:

- The development of improved ways to deliver ambulatory care services, $31.9 million, or 67.5 percent;
- The education and training of various types of health professionals needed to plan, staff, and manage ambulatory care services, $9.8 million, or 20.9 percent;
- The evaluation of major Foundation programs, $2.8 million, or 5.8 percent;
- The conduct of highly targeted health care research, and the development of other information intended to be useful to those formulating and evaluating public policy in health affairs, $2.7 million, or 5.8 percent.

Viewed in terms of the Foundation's objectives, the 1978 grant funds were apportioned as follows:

- $42.8 million, or 90.6 percent, for programs to increase access to primary care services;
- $1.9 million, or 4 percent, for programs to improve the performance of the health care system in order to ensure quality care;
- $1.4 million, or 3 percent, for programs to improve the formulation of public policy in health affairs;
- $1.1 million, or 2.4 percent, for charitable institutions and programs in the New Brunswick, New Jersey area where the Foundation maintains a historic and continuing interest.

Appropriations since the Foundation became a national philanthropy in December 1971 now total $318.5 million. A series of charts beginning on page 48 summarizes data from this seven-year period on proposals received, grants made, and a variety of analyses to portray how these funds have been allocated.

Program information

A description of selected 1978 grants concludes this section, but a list of all grants made in 1978 begins on page 71. This is followed by a list of grants made in previous years, and which were still active in 1978 (i.e., those with unpaid balances on January 1, 1978). A descriptive Program Summary for each of these grants is available free upon request. Requests should include the title of the grant, the institutional recipient, the grant ID number, and should be addressed to:

Communications Office
The Robert Wood Johnson Foundation
P.O. Box 2316
Princeton, New Jersey 08540.

Also available without charge from the same address are copies of the following Special Reports:

- Regionalized Perinatal Services
- A New Survey on Access to Medical Care
- Emergency Medical Services
- New Roles for Nurses in Family Care; Citizen-Legislators: Coping with the Health Agenda: Unraveling the Battered Child Syndrome.

Major developments in the grant program

Evidence is accumulating that primary medical care is becoming accessible to more and more Americans. As a result, service programs and projects receiving Foundation assistance in 1978 were increasingly directed toward the remaining groups that continue to have problems getting care, especially residents of inner-city and rural areas, children of low-income families and the low-income elderly.

Municipal health services

Last year, 34 of the nation's 50 largest cities submitted detailed applications for five grants offered under the Foundation's Municipal Health Services Program, co-sponsored by the American Medical Association and the United States Conference of Mayors. This response seemed an accurate reflection of widespread concern and interest by local governments in improving primary care in inner cities. Each municipality pledged, if a grant were received, to draw upon resources of its city hospital and health department to offer primary care in at least three neighborhood locations. These medical service sites would offer underserved people an alternative to the city hospitals' outpatient clinics.

Upon recommendation of the Program's advisory committee, the Foundation made grants in 1978 to the municipal governments of Baltimore, Cincinnati, Milwaukee, San Jose, and St. Louis to implement their plans for offering care to a total of more than 650,000 people.

The federal Health Care Financing Administration has invited the selected cities to participate in a reimbursement study that includes special waivers of Medicaid and Medicare regulations to expand reimbursement for general and preventive services provided through the neighborhood sites.

A group at Columbia University, under a separate grant, is conducting an evaluation of the Program.

Other urban service programs

In addition to municipal hospitals and health departments, there are relatively few other established institutions—principally large hospitals and academic medical centers—which have indicated their commitment to staying in inner cities and continuing to offer primary care services. Four such institutions are the Drew Postgraduate School of Medicine in Los Angeles; Louisiana State University School of Medicine in New Orleans; Montefiore Hospital in New York; and the Sisters of Mercy Health Corporation operating three hospitals in Detroit.

Each is prepared to expand its primary care services to reach 35,000 to 60,000 people living in areas of severe medical need—census tracts where virtually all health and social indices are among the worst in the country.

In 1978 the first grants under the Foundation's Urban Health Initiatives Program were made to these four institutions to help them develop their plans. These grants are contingent upon the availability of federal funds and National Health Service Corps personnel to meet the operating needs of the expanded primary care efforts.

Primary care group practices

In Scranton, Pennsylvania, 27,000 people live in a medically under-served area of the city that is largely one of middle-income households, although unemployment is high and incomes in many of the households are below the poverty level. In addition, there is a large proportion of children and elderly people, and illness rates are high.

In response to these circumstances, and to meet medical needs in several adjacent

communities, a board of local residents and community leaders planned and in 1978 opened the Scranton Primary Health Care Center. The Center will be staffed by physicians, nurse practitioners, and a full-time administrator. In addition to a grant from the Foundation, the Center has received substantial assistance from local charitable sources, the national Campaign for Human Development, and the Kresge Foundation.

Four grants were also made in 1978 under the Foundation's Community Hospital Program to establish primary care group practices sponsored by participating hospitals in Michigan, Georgia, Kentucky, and the District of Columbia. A total of 50 community hospitals in 35 states are now developing practices under this program. Similarly, three small-town primary care group practices—in Michigan, North Carolina, and Virginia—received grants under the Foundation's Rural Practice Project during 1978, bringing the number of these practices to 13 in 12 states. Both of these Foundation programs are scheduled to conclude their grant-making in 1979.

School health services

A number of trends over the past few years have focused national and local attention on schools as logical sites for offering primary health care for children. However, a study funded by the Foundation in 1978 shows that many states' laws and regulations for school health services now permit more extensive services than are generally being offered.

Based on several "model" projects, and months of planning that involved consultants from across the country, the Foundation's School Health Services Program was announced in 1977. Thirty states submitted applications for assistance, and in 1978, four grants were made under this program—to Colorado, New York, North Dakota and Utah. These states have now begun projects to employ nurse practitioners in selected schools where the children lack appropriate access to primary care services. Supervised by pediatricians in the participating communities, the school nurse practitioners will:

- Care for minor injuries, manage most common childhood illnesses, and identify potentially serious conditions requiring the attention of a physician or other health professional;
- Help children and their families locate needed medical services and then follow-up to make sure those services are received;
- Work with parents and physicians in the care of chronically ill and disabled children;
- Give immunizations, physical exams, and conduct periodic screenings for health problems.

Continuing a model project

A school-based health care project in Hartford, Connecticut, begun three years ago, is one of the models for the Foundation's School Health Services Program. Ninety percent of the 800 children in grades K through 6 in the demonstration school are Medicaid-eligible, and care is provided by two nurse practitioners and two aides, with physician backup. In addition, there is a part-time dentist overseeing a hygienist and aide.

The Foundation's 1978 grant will continue this project and support an evaluation that includes a comparison school.

Initial data indicate the nurse practitioners with physician back-up have been able to handle most of the health problems presented by the children. Moreover, children in the comparison schools have increased their use of hospital emergency rooms and outpatient services, but there has been a decline in the use of such services by children in the demonstration school.

Programs for the elderly

Three programs testing new approaches for meeting the special needs of elderly persons for a variety of health care services were started in 1978 with Foundation assistance.

The National Council on the Aging and a group of collaborating universities are establishing service and learning centers using students to provide a wide variety of services to older persons. These include medical, dental, and nursing care; speech and hearing therapy; and pharmacy and nutrition services.

Students will participate as part-time employees, as volunteers, or in field clerkships offering academic credit. The participating schools are Boston University, the University of Denver, George Washington University, the University of Georgia, Hampton Institute, and Indiana's Consortium for Urban Education.

In Baltimore as in most communities, it is not unusual for indigent elderly patients to stay in the hospital longer than is medically necessary. They may have no one at home to care for them, and beds in nursing homes offering intermediate-level care are in short supply.

The Johns Hopkins Hospital is testing the feasibility of identifying and training surrogate families which, for a fee, will provide care in their homes to elderly patients discharged from the Hospital.

A physician-directed team of nurses and social workers from Johns Hopkins will serve as the patients' primary and continuing source of health care and will monitor the surrogate families' performances. A planned evaluation will seek answers to three questions:

- Is foster family care a cost-effective alternative to nursing home care?
- What improvements in the patients' health and ability to function can be achieved by such care?
- What are the characteristics of families that provide effective care of patients in the home?

The United Way of the Minneapolis Area has convened a coalition of public and private agencies in a one-year planning effort addressing the problems experienced by the elderly requiring health and related services.

In this city, 20 percent of the population, or 87,000 people, are over 60 years of age. Over half of these people have incomes near or below the poverty level, and 20 percent live alone. Moreover, the provision of health and related services for the elderly follows a national pattern of responsibility fragmented among multiple institutions and agencies with substantial variations in eligibility requirements, service content and style, sites, and cost to the individual. The Minneapolis United Way coalition's ultimate objective is to overcome these barriers and develop a coordinated system of health and related services for the elderly.

Other service projects

Continued assistance was provided in 1978 for four service activities previously supported by the Foundation: a Vanderbilt University program to help rural communities develop and improve their health services; Georgetown University's prepaid Community Health Plan; the Barrio Comprehensive Child Health Care Center in San Antonio; and the University of Tennessee's involvement in a Memphis regional primary care network that was one of the models for the Foundation's Municipal Health Services Program.

Two programs announced

During 1978 planning was completed, advisory committees formed, and two new national programs were announced. Under the Hospital-Sponsored Ambulatory Dental Services Program, hospitals with dental residency programs will be assisted to expand their outpatient activities to offer emergency, basic, and preventive dental care for people who currently lack adequate access to these services. Plans call for as many as 25 grants of up to $500,000 each during 1979.

The General Pediatrics Academic Development Program will assist six universities to train future faculty, to conduct clinical research, and to develop models of patient care—all centered on the medical problems commonly seen in the out-of-hospital practice of general pediatrics.

Applications for both programs have been received and reviewed, and most site visits were completed this year. Grants are expected to be made in early 1979.

Special assistance projects

The Rural Health Center Series—a six-volume set of handbooks prepared by a group of well-qualified authors for health professionals and community leaders alike—is scheduled for publication in the spring of 1979. The handbooks, prepared and published with Foundation support, are based on a study of 24 rural health centers staffed by nurse practitioners and physicians' assistants backed up by physicians.

The Series was prepared under the auspices of the University of North Carolina Health Services Research Center and the North Carolina Office of Rural Health Services. The six titles are: Rural Health Centers in the United States; Planning and Managing Rural Health Centers; Clinical Roles in Rural Health Centers; A Legal Guide for Rural Health Programs; Facility Planning, Design, and Construction for Rural Health Centers; and Medical Record and Index Systems for Community Practice.

A 1978 grant to Boston University will support a project offering developmental assistance for Individual Practice Associations (IPA's)—affiliations of independent physicians offering prepaid health care in accordance with provisions of the federal Health Maintenance Organization program. Operating out of the University's Health Policy Institute, the project will assist a

limited number of new IPA's with such tasks as attracting the initial complement of physicians, defining alternative benefit packages and master group contracts, and approaching insurance carriers to begin contract negotiations.

Nurse practitioner faculty training
Over the past seven years, the Foundation has supported nurse practitioner training to help expand access to primary health care services.

Two ingredients have made it possible for these new health practitioners to assume expanded clinical responsibilities. One is the medical skills they have acquired, such as history taking, physical examination, ordering and interpreting basic laboratory tests, and following diagnostic protocols and treatment plans. The other has been the development of systems of care in which nurse practitioners can use these and their nursing skills with appropriate physician supervision and collaboration.

To prepare nursing faculty for new careers as teacher-practitioners for the nurse practitioner profession, in 1978 the Foundation's Nurse Faculty Fellowship Program was extended two years beyond the initial three-year commitment. The new appropriations will enable a total of 100 faculty from throughout the country to complete one-year fellowships at the Program's four academic sites—the University of Colorado, Indiana University, the University of Maryland, and the University of Rochester.

Two other academic centers—the University of Washington and the University of Pennsylvania—also received grants in 1978 to implement their plans to become regional graduate centers for preparing nurse practitioner faculty.

Emergency nurse/primary care training
Last year the Foundation began a program to help a number of hospitals and schools of nursing develop primary care training for emergency department nurses from smaller, outlying hospitals in their regions. In 1977 two such programs were initiated. This year four additional institutions received grants to complete the series: Good Samaritan Hospital in Portland, Oregon; Hermann Hospital in Houston; Maricopa County General Hospital in Phoenix; and Nebraska Methodist Hospital in Omaha.

Academic careers in family practice
In 1977 the Foundation announced a Family Practice Faculty Fellowship Program with grants to four universities. In 1978, two additional universities became participants: Case Western Reserve University and the University of Missouri-Columbia. They will offer two-year fellowships to young physicians planning academic careers involving research, teaching, and the practice of family medicine.

Training rural health aides in Alaska
Since 1975 the Foundation has assisted the development of Alaska's program to train Rural Health Aides—Eskimos and Indians providing first-line medical care for 40,000 native peoples living in 200 villages scattered across the state's vast arctic and subarctic wilderness.

Progress to date includes the establishment of a coordinating office for the training program by the University of Alaska, publication of a manual for the aides, and the development of certificate and associate degree curricula for the aides.

A 1978 grant will support the development of course and teaching materials for implementation of the curricula and further strengthening of in-service training for existing aides and their assistants.

Minority health career opportunities
Four grants in 1978 continue the Foundation's support of selected institutions assisting

minority and other disadvantaged students interested in health careers:

(1) Tulane University's program for the recruitment and retention of minority students for medical school, including a summer enrichment experience, year-round counseling and tutoring, and help for other schools developing similar programs;

(2) The National Fund for Medical Education's program of small grants for medical school summer studies for minority premedical students;

(3) The Association of University Programs in Health Administration's recruitment of minority college students for graduate programs leading to careers in the management of health institutions; and

(4) The University of Southern California School of Medicine's programs of educational enrichment, counseling, and tutorials for disadvantaged premedical students within a consortium of six area undergraduate institutions.

Guaranteed student loans

With a previous year's grant of $500,000, a total of $3.3 million was made available for borrowing by medical, osteopathic, and dental students under the Foundation's Guaranteed Student Loan Program administered by United Student Aid Funds, Incorporated. In 1978, a $1 million grant for this program is expected to guarantee an additional $7 million in loans to supplement other assistance available for students in the three health professions.

Perinatal program studies

In 1975 the Foundation began a national perinatal program to establish eight regional systems to identify and care for the 15-25 percent of pregnant women at high risk to serious complications affecting their health or their babies' health. The objective is to test the belief that the organization of such services on a regional basis would lead to a

reduction of maternal and infant deaths and birth defects.

In 1978 three grants were made for studies building further on this program. One grant to The Johns Hopkins University expands the scope and duration of the program's principal evaluation, which also began in 1975.

Two other studies—at the University of Arizona and Case Western Reserve University—will use somewhat different approaches seeking to provide further clarification of the Program's outcome by determining what proportion of high-risk infants admitted to the neonatal intensive care units (NICU's) have survived and can be classified as "normal" three years later. Included in the Case Western Reserve University study is a comparison of outcomes between infants delivered in one hospital and then transported to the hospital with an NICU and those whose mothers were transported to the hospital with the NICU before giving birth. Both projects will periodically check the children's physical, neurologic, and intellectual development and will help parents obtain any needed medical or social services.

Other program-related research

A group at the University of North Carolina has begun a national study of programs offering rural health care services. Various models have been identified—including the Foundation's Rural Practice Project—for comparison with respect to their stability; cost; effects on access to care; and physician, patient, and local community satisfaction. The federal government and the Foundation are both participating in funding this project.

Another University of North Carolina group, also receiving both Foundation and federal support, has begun a study of the new and expanded role of state and local health departments developing ambulatory care services. This study will assess the potential of these agencies for designing and operating primary care services in underserved areas.

An inter-disciplinary group at Northwestern University will use a 1978 grant from the Foundation to study three areas of management related to ambulatory care services: (1) organizational arrangements that can reduce institutionalization of the elderly and chronically ill; (2) linkages with other health care services and providers that can increase the effectiveness of hospital emergency rooms, particularly for non-emergent problems; and (3) the use of mathematical modeling to develop optimal organization designs for ambulatory practices.

The town of Brookline, Massachusetts' research and demonstration program to detect and prevent health and learning handicaps in preschool children also received continuing support. The educational and diagnostic service elements of this program will end at the conclusion of the 1978-79 school year, and work continues to refine and validate a number of new methods that have emerged from this program to detect problems and monitor child development.

Health policy fellowships

A 1978 grant to the National Academy of Sciences, Institute of Medicine will continue the Foundation's Health Policy Fellowship Program until 1982. Under previous grants, thirty academic health center faculty members, by the end of 1979, will have completed one-year fellowships that include an intensive orientation to Washington health policy affairs and nine-month Congressional and/or executive branch staff assignments. The fellowships—six each year—serve the dual purpose of developing a cadre of academic health center faculty with firsthand knowledge of the federal health policy process, and providing federal policymakers with the assistance of competent professionals experienced in academic health affairs.

Bibliography

Each year the Foundation's grantees report the publications and other information materials that have been produced as a direct or indirect result of their grants.

In 1978 these reports cited 64 books, 57 book chapters, 346 journal articles, 217 reports, and 63 films, tapes and other audiovisual materials.

This bibliography is a sample of citations from each category reported in 1978, and from among the publications of the Foundation's staff.

Books

Bruhn, John G., Ramiro Caballero and Martha G. Hinkley. *A Doctor in the House? Information for Parents and Spouses of Medical Students*. Galveston, Texas: University of Texas Medical Branch, 1978.

Cluff, Leighton E. and Joseph E. Johnson, III. (series eds.). *Clinical Concepts of Infectious Diseases*. Second edition. Baltimore, Maryland: Williams and Wilkins Company, 1978.

Commission on Public-General Hospitals. *The Future of the Public-General Hospital: An Agenda for Transition*. Chicago: Hospital Research and Educational Trust, 1978.

Davis, Karen. *Health and the War on Poverty: A Ten Year Appraisal*. Washington, D.C.: Brookings Institution, 1978.

Funkenstein, Daniel H. *Medical Students, Medical Schools and Society During Five Eras: Factors Affecting the Career Choices of Physicians, 1958-1976*. Cambridge, Massachusetts: Ballinger Publishing Company, 1978.

Ginzberg, Eli. *Health Manpower and Health Policy*. Montclair, New Jersey: Allanheld, Osmun and Company, 1978.

Group Practice: Guidelines to Forming or Joining A Medical Group. Denver: Center for Research in Ambulatory Health Care Administration, 1978.

Gualtieri, Patricia Kelley. *State Issues in Drug and Alcohol Abuse: A Sourcebook*. Washington, D.C.: Georgetown University Health Policy Center, 1977.

Hoekelman, Robert A. (ed.). *Principles of Pediatrics: Health Care of the Young*. New York: McGraw-Hill Book Company, 1978.

Institute of Medicine. *A Manpower Policy for Primary Care*. Washington, D.C.: National Academy of Sciences, 1978.

Keith, Kenneth D. *Behavioral Science and Dentistry: Selected Readings*. Lincoln, Nebraska: University of Nebraska, College of Dentistry, 1974.

Kempe, Ruth S. and C. Henry Kempe. *Child Abuse*. Vol. 8 of *The Developing Child* series. Edited by Jerome Bruner, Michael Cole and Barbara Lloyd. Cambridge, Massachusetts: Harvard University Press, 1978.

LeRoy, Lauren and Philip R. Lee. *Deliberation and Compromise: The Health Professions Educational Assistance Act of 1976*. Cambridge, Massachusetts: Ballinger Publishing Company, 1977.

Luft, Harold S. *Poverty and Health: Economic Causes and Consequences of Health Problems*. Cambridge, Massachusetts: Ballinger Publishing Company, 1978.

McCorkle, James E., Eugene L. Nagel, Donald G. Penterman, and Robert A. Mason. *Basic Telecommunications for Emergency Medical Services*. Cambridge, Massachusetts: Ballinger Publishing Company, 1978.

Mechanic, David. *Medical Sociology*. Second edition. New York: The Free Press, 1978.

Millman, Michael L. (ed.). *Nursing Personnel and the Changing Health Care System*. Cambridge, Massachusetts: Ballinger Publishing Company, 1978.

Mushkin, Selma J. (ed.). *Academe and State Legislative Policies for Health*. Washington, D.C.: Georgetown University Public Services Laboratory, 1976.

Nader, Philip R. (ed.). *Options for School Health*. Germantown, Maryland: Aspen Systems Corporation, 1978.

Nurse-Midwifery in the United States: 1976-1977. Washington, D.C.: American College of Nurse-Midwives, 1978.

Pantell, Robert, James Fries and Donald Vickery. *Taking Care of Your Child: A Parent's Guide to Medical Care*. Reading, Massachusetts: Addison-Wesley Publishing Company, 1977.

Rogers, David E. *American Medicine: Challenges for the 1980s*. Cambridge, Massachusetts: Ballinger Publishing Company, 1978.

Soderstrom, Lee. *The Canadian Health System*. London, England: Groom-Helm, 1978.

Walsh, Diana Chapman and Richard H. Egdahl. *Health Services and Health Hazards: The Employee's Need to Know*. New York: Springer-Verlag, 1978.

Wentz, Frank M. and Kenneth D. Keith. *Dental Health Care: A Teacher Resource*. Lincoln, Nebraska: Nebraska State Department of Education, 1974.

Book chapters

Alpert, Joel J. "The Role of Health Professionals in Initiation of Change in Primary Care Delivery: An Educational View." *Proceedings of Factors Promoting or Inhibiting Change in Service Organizations and Their Clients*. Edited by W. J. Horwath. Ann Arbor, Michigan: University of Michigan, 1976.

Alpert, Joel J. "The Training of the Primary Care Physician in the Roles of Family Practice, Internal Medicine, Obstetrics and Gynecology and Pediatrics in Providing Primary Care." *Report of the 73rd Ross Conference on Pediatric Research*. Edited by D. N. Berwick. Columbus, Ohio: Ross Laboratories, 1977.

Appel, Francis A. and Alvin I. Mushlin. "Developing a Quality Assurance Strategy for Primary Care." *Improving Ambulatory Health Care Delivery*. Edited by Gail S. Lasdon. Lexington, Massachusetts: D. C. Heath & Company, 1977.

Butler, Lewis, et al. "Cooperation Between Health System Agencies and Professional Standards Review Organizations." *Papers on the National Health Guidelines: The Priorities of Section 1502*. Hyattsville, Maryland: United States Health Resources Administration, 1977.

Chamberlin, R. W. "Anticipatory Guidance: The Role of the Physician in Patient Education." *Principles of Pediatrics: Health Care of the Young*. Edited by Robert A. Hoekelman, et al. New York: McGraw-Hill Book Company, 1978.

Crampton, Richard S. "Mobile Coronary Care: Evaluation of Efficiency." *Acute Myocardial Infarction*. Edited by E. Donoso and J. Lipski. New York: Stratton Intercontinental Medical Book Company, 1978.

Grant, Christine. "Financing and Budgeting School Health Services." *Options for School Health*. Edited by Philip R. Nader. Germantown, Maryland: Aspen Systems Corporation, 1978.

Jonsen, Albert, Philip R. Lee and Diane Dooley. "Social and Economic Factors Affecting Public Policy and Decision Making in the Care of the Defective Newborn." *Decision Making and the Defective Newborn*. Edited by C. A. Swinyard. Springfield, Illinois: Charles C. Thomas, 1978.

Kronstadt, Diana, Melvin D. Levine and Thomas Ferb. "A Bi-Disciplinary Comparison of Developmental Findings in an Early Education Project." *Proceedings of the Second International Conference on Developmental Screening*. Edited by William K. Frankenburg. Denver, Colorado: John F. Kennedy Child Development Center of the University of Colorado Medical Center, 1978.

Lawrence, Robert S. and Joseph L. Dorsey. "The Generalist-Specialist Relationship and the Art of Consultation." *Primary Care and the Practice of Medicine*. Edited by John Noble. Boston: Little, Brown and Company, 1977.

Lawrence, Robert S. and Samuel M. Putnam. "Patients' Criteria by Which Patients Assess the Outcome of Care." *Primary Care and the Practice of Medicine*. Edited by John Noble. Boston: Little, Brown and Company, 1977.

Lee, Philip R. and Diane Dooley. "Social Services for the Disabled Child." *Ethics of Newborn Intensive Care*. Edited by Albert Jonsen and Michael Garland. Berkeley: University of California, Institute of Governmental Studies, 1976.

Marmor, Theodore R., Douglas Conrad and Richard Foster. "Government Financed Systems of Health." *Medical and Health Annual*. Chicago: Encyclopaedia Britannica, Inc., 1976.

Mechanic, David. "The Medical Marketplace and Public Interest Law: Part I. The Medical Marketplace and Its Delivery Failures." *Public Interest Law: An Economic and Institutional Analysis*. Edited by Burton A. Weisbrod, et al. Berkeley: University of California Press, 1978.

Merkatz, Irwin and Avroy Fanaroff. "The Regional Perinatal Center." *Advances in Obstetrics and Gynecology, Vol. II*. Edited by W. J. Sweeney and R. M. Caplan. Baltimore: The Williams and Wilkins Company, 1978.

Neser, W., et al. "Unmet Health Care Needs and Health Care Policy." *Health Costs and Health Indicators: Policy, Planning, and Evaluation*. Edited by J. Elinson, A. Mooney and A. Seigmann. Washington, D.C.: American Association for the Advancement of Science, 1977.

Pless, Barry I. "Community Pediatrics and Regionalization: The Quebec Experience," and "Non-Medical Support and Community Care of Children with Chronic Illness." *Proceedings of the Pediatric Symposium: Redesigning the Child Care Encounter*. Vancouver: University of British Columbia, 1977.

Scitovsky, Anne A. and Nelda McCall. "Impact of Coinsurance on the Demand for Physician Services." *Health Handbook 1976*. Edited by G. K. Chacko. Amsterdam: North-Holland Publishing Company, 1976.

Simon, John. "Mirror or Window: The Interface of Health Services Evaluation and Provider Education." *Evaluation of Child Health Services: The Interface Between Research and Medical Practice*. Edited by S. J. Bosch and J. Arias. Washington, D.C.: U.S. Government Printing Office, 1978.

Somers, Anne R. and Herman M. Somers. "A New Framework for Health and Health Care Policies." *Papers on the National Health Guidelines: Conditions for Change in the Health Care System*. Hyattsville, Maryland: United States Health Resources Administration, 1977.

Journal articles

Als, Heidelise. "The Newborn Communicates." *Journal of Communication*, 27:66-73, Spring, 1977.

Andersen, Ronald. "Health Status Indices and Access to Medical Care." *American Journal of Public Health*, 68(5):458-463, May, 1978.

Andersen, Ronald and Lu Ann Aday. "Access to Medical Care in the U.S.: Realized and Potential." *Medical Care*, 16(7):533-546, July, 1978.

Andersen, Ronald, et al. "Overview of a Design to Evaluate the Impact of Community Hospital-Sponsored Primary Care Group Practices." *Medical Group Management*, 25(5):42-46, September-October, 1976.

Beck, John, et al. "The Primary Care Problem." *Clinical Research*, 24(4):258-266, October, 1976.

Berman, Richard A. and Thomas W. Moloney. "Are Outpatient Departments Responsible for the Fiscal Crisis Facing Teaching Hospitals?" *Journal of Ambulatory Care Management*, 1(1):37-57, January, 1978.

Block, James A., et al. "Physicians and Hospitals: Providing Primary Care." *Medical Group Management*, 25(2):35-38, March-April, 1978.

Burnett, Robert D. and Leo S. Bell. "Projecting Pediatric Practice Patterns." *Pediatrics*, 62(4 Part 2):625-680, October (Supplement), 1978.

Bystrom, Eric B. and Thomas K. Barber. "Dental Care for the Disabled Patient." *California Dental Association Journal*, 4(2):44-48, February, 1976.

Cartwright, Lillian K. "Attitudes of a Sample of California Physicians Toward Criteria of High-Quality Care." *Journal of Medical Education*, 53(4):321-329, April, 1978.

Chamberlin, R. W. "Relationships Between Child-Rearing Styles and Child Behavior Over Time." *American Journal of Diseases of Children*, 132(2):155-160, February, 1978.

Chassin, Mark R. "The Containment of Hospital Costs: A Strategic Assessment." *Medical Care*, 16 (10 Supplement):1-55, October, 1978.

Cluff, Leighton E. "The Integrative Function of Physicians in Making Medical Decisions." *The Pharos*, 41(4):2-4, October, 1978.

Cohen, Sarale E., Leila Beckwith and Arthur Parmelee. "Receptive Language Development in Preterm Children as Related to Caregiver-Child Interaction." *Pediatrics*, 61(1):16-20, January, 1978.

Cowen, David, et al. "Impact of a Rural Preventive Outreach Program on Children's Health." *American Journal of Public Health*, 68(5):471-476, May, 1978.

Craig, John and Michael Koleda. "The Urban Fiscal Crisis in the United States, National Health Insurance and Municipal Hospitals." *International Journal of Health Services*, 8(2):329-349, 1978.

Crandall, Lee A., Richard C. Reynolds and Wilmer J. Coggins. "Evaluation of a Rural Clinic Rotation for Medical Residents." *Journal of Medical Education*, 53(7):597-599, July, 1978.

Delbanco, Thomas L. "The Periodic Health Examination for the Adult: Waste or Wisdom?" *Journal of Primary Care*, 3(3):205-214, June, 1976.

Delbanco, Thomas L. and John N. Parker. "Primary Care at a Teaching Hospital: History, Problems, and Prospects." *Mount Sinai Journal of Medicine*, 45(5):628-645, September-October, 1978.

Dutton, Diana. "Explaining the Low Use of Health Services by the Poor: Costs, Attitudes or Delivery Systems?" *American Sociological Review*, 43:348-368, June, 1978.

Eisenberg, John M. "An Educational Program to Modify Laboratory Use by House Staff." *Journal of Medical Education*, 52(7):578-581, July, 1977.

Eisenberg, John M. and Arnold Rosoff. "Physician Responsibility for the Cost of Unnecessary Medical Services." *New England Journal of Medicine*, 299(2):76-80, July 13, 1978.

Fanaroff, Avroy and Irwin Merkatz. "Modern Obstetrical Management of the Low Birth Weight Infant." *Clinics in Perinatology*, 4(2):215-237, September, 1977.

Featherstone, Harvey J. and Robert J. Petersdorf. "The Medical Specialist as a Primary Care Provider." *Mount Sinai Journal of Medicine*, 45(5):620-627, September-October, 1978.

Fletcher, Robert H. and Suzanne W. Fletcher. "The Medical Polyclinic: An Approach to Conflicting Needs in a Teaching Hospital." *Journal of Medical Education*, 51(8): 634-643, August, 1976.

Fletcher, Suzanne W., et al. "Multiphasic Screening: Case-Finding Tool in a Teaching Hospital Medical Clinic." *JAMA*, 237(9): 887-891, February 28, 1977.

Fuchs, Victor R. and Joseph P. Newhouse. (eds.). *The Economics of Physician and Patient Behavior*. Volume 13, Supplement, *Journal of Health and Human Resources*, 1978.

Ginzberg, Eli. "How Much Will U.S. Medicine Change in the Decade Ahead?" *Annals of Internal Medicine*, 89(4):557-564, October, 1978.

Golden, Archie and Henry Seidel. "Staffing Pattern of a Health Maintenance Organization: A Systems Approach." *JAMA*, 240(18): 1969-1972, October 27, 1978.

Gorry, G. Anthony, Stephen G. Parker and William B. Schwartz. "The Diagnostic Importance of the Normal Finding." *New England Journal of Medicine*, 298(9):486-489, March 2, 1978.

Gough, Harrison G. "Some Predictive Implications of Premedical Scientific Competence and Preferences." *Journal of Medical Education*, 53(4):291-300, April, 1978.

Greene, Sandra B., Eva J. Salber and Jacob J. Feldman. "Distribution of Illnesses and Its Implications in a Rural Community." *Medical Care*, 16(10):863-877, October, 1978.

Hale, Julia, Michele Snow and Doris J. Stiefel. "Providing Office Accessibility to the Disabled Patient." *Journal of Dentistry for the Handicapped*, 3(1):10-14, Summer, 1977.

Haller, Michael J. and John F. Collins. "A Case Report in a Rural Health Center." *Journal of Family Practice*, 6(1):143-147, January, 1978.

Harris, Thomas R., Jerry W. Isaman and Harlan R. Giles. "Improved Neonatal Survival Through Maternal Transport: Outcome Data from the Arizona High-Risk Maternal Transport System." *Obstetrics and Gynecology*, 52(3):293-300, September, 1978.

Hodge, Robert H. and Robert A. Reid. "A Method for Assuring Continuity of Care in Residency Training Experience." *Journal of Medical Education*, 52(9):739-744, September, 1977.

Hoey, John R. and Alison D. McDonald. "Hospital Admission Before and After Medicare in Quebec." *Medical Care*, 16(1):72-78, January, 1978.

Isaacs, Marion. "Toward a National Health Policy: A Realist's View." *American Journal of Nursing*, 78(5):848-851, May, 1978.

Jennett, Raymond J., et al. "A Computerized Perinatal Data System for a Region." *American Journal of Obstetrics and Gynecology*, 131(2): 157-163, May 15, 1978.

Jonsen, Albert and Andrew Jameton. "Social and Political Responsibilities of Physicians." *The Journal of Medicine and Philosophy*, 2(2):376-400, December, 1977.

Katz, Harvey P., Janet Pozen and Alvin I. Mushlin. "Quality of Telephone Care: Assessment of a System Utilizing Non-Physician Personnel." *American Journal of Public Health*, 68(1):31-38, January, 1978.

Keith, Kenneth D., Frank M. Wentz and Robert Wood. "A Practical Behavior-Based Oral Hygiene Program for Elementary School Children." *Journal of the American Dental Association*, 94(6):1183-1186, June, 1977.

Kessner, David M. "Quality Assessment and Assurance: Early Signs of Cognitive Dissonance." *New England Journal of Medicine*, 298(7):381-386, February 16, 1978.

Kirkwood, C. Richard, Vincent Boisseau and Donald F. Treat. "Family Medicine Training and National Health Manpower Needs." *Journal of Medical Education*, 53(5):422-424, May, 1978.

Lawrence, Robert S., et al. "Physician Receptivity to Nurse Practitioners: A Study of the Correlates of the Delegation of Clinical Responsibility." *Medical Care*, 15(4):298-310, April, 1977.

Lee, Philip R. "The Frontiers of Health Planning." *American Journal of Health Planning*, 1(2):1-6, October, 1976.

LoGerfo, J. P., et al. "Variations in Surgical Rates: An Analysis of Differences Between Medical Care Plans." *Clinical Research*, 26(3):333A, April, 1978.

Luft, Harold S. "How Do Health-Maintenance Organizations Achieve Their 'Savings'?" *New England Journal of Medicine*, 298(24):1336-1343, June 15, 1978.

McDermott, Walsh. "Health Impact of the Physician." *The American Journal of Medicine*, 65(4):569-571, October, 1978.

McDermott, Walsh. "The Public Good and One's Own." *Perspectives in Biology and Medicine*, 21(2):167-187, Winter 1978.

McGreehan, Deirdre M. and Samuel W. Warburton. "How to Help Families Cope with Caring for Elderly Members." *Geriatrics*, 33(6):99-106, June, 1978.

MacPherson, A. S., et al. "The Development and Application of Indices of Health: General Methods and a Summary of Results." *American Journal of Public Health*, 67(5):423-428, May, 1977.

Marmor, Theodore R. "Welfare Medicine: How Success Can Be a Failure." *The Yale Law Review*, 85:1149-1159, July, 1976.

Mechanic, David. "Approaches to Controlling the Costs of Medical Care: Short-Range and Long-Range Alternatives." *New England Journal of Medicine*, 298(5):249-254, February 2, 1978.

Mechanic, David. "Considerations of the Design of Mental Health Benefits Under National Health Insurance." *American Journal of Public Health*, 68(5):482-488, May, 1978.

Mendenhall, Robert C., Roger A. Girard and Stephen Abrahamson. "A National Study of Medical and Surgical Specialties; I. Background, Purpose, and Methodology." *JAMA*, 240(9): 848-852, September 1, 1978.

Mendenhall, Robert C., et al. "A National Study of Medical and Surgical Specialties; II. Description of the Survey Instrument." *JAMA*, 240(11):1160-1168, September 8, 1978.

Mushlin, Alvin I. and Francis A. Appel. "Extramedical Factors in the Decision to Hospitalize Medical Patients." *American Journal of Public Health*, 66(2):170-172, February, 1976.

Mushlin, Alvin, et al. "The Role of New Health Practitioners in a Prepaid Group Practice: Provider Differences in Process and Outcomes of Medical Care." *Medical Care*, 14(4):326-347, April, 1976.

Pozen, Michael and Philip Bonnet. "Effectiveness of Educational and Administrative Interventions in Medical Outpatient Clinics." *American Journal of Public Health*, 66(2): 151-155, February, 1976.

Pozen, Michael, et al. "Studies of Ambulance Patients with Ischemic Heart Disease. I. The Outcome of Pre-Hospital Life-Threatening Arrhythmias in Patients Receiving Electrocardiographic Telemetry/Therapeutic Interventions." *American Journal of Public Health*, 67(6):527-531, June, 1977.

Rogers, David E. and Robert J. Blendon. "The Academic Medical Center: A Stressed American Institution." *The New England Journal of Medicine*, 298(17):940-950, April 27, 1978.

Runyan, John W., Jr. "The Memphis Chronic Disease Program: Comparisons in Outcome and the Nurses' Extended Role." *JAMA*, 231(3): 264-267, January 20, 1975.

Sadler, Georgia, Frank C. Snope and Bruce F. Currie. "A Quality Assurance Program for Graduate Education in Family Medicine." *Journal of Family Practice*, 4(4):751-752, April, 1977.

Salkever, David S., et al. "Episodes of Illness and Access to Care in the Inner City: A Comparison of HMO and Non-HMO Population." *Health Services Research*, 11(3):252-270, Fall, 1976.

Sawtell, Rodney, John F. Simon, Rune J. Simeonsson. "The Effect of Five Preparatory Methods Upon Child Behavior During the First Dental Visit." *Journal of Dentistry for Children*, 41(5):367-375, September-October, 1974.

Scheffler, Richard M., et al. "A Manpower Policy for Primary Health Care." *New England Journal of Medicine*, 298(19):1058-1062, May 11, 1978.

Schroeder, Steven A. and Marcia Daniels. "Variation Among Physicians in Use of Laboratory Tests. II. Relation to Clinical Productivity and Outcomes of Care." *Medical Care*, 15(6):482-487, June, 1977.

Schroeder, Steven A., William A. Knauss and David O. Davis. "Impact of New Technology: The CT Scanner." *Medical Care*, 15(7): 533-542, July, 1977.

Schroeder, Steven A. and Dennis O'Leary. "Differences in Laboratory Use and Length of Stay Between University and Community Hospitals." *Journal of Medical Education*, 52(5):418-420, May, 1977.

Schroeder, Steven A. and Jonathan A. Showstack. "Financial Incentives to Perform Medical Procedures and Laboratory Tests: Illustrative Models of Office Practice." *Medical Care*, 16(4):289-298, April, 1978.

Schwartz, William B. and Neil K. Komesar. "Doctors, Damages and Deterrence: An Economic View of Medical Malpractice." *New England Journal of Medicine*, 298(23):1282-1289, June 8, 1978.

Shortell, Stephen M., et al. "Hospital Sponsored Primary Care: Organizational and Financial Issues." *Medical Group Management*, 25(3): 16+, May-June, 1978.

Somers, Anne R. "Violence, Television and the Health of American Youth." *New England Journal of Medicine*, 294(15):811-817, April 8, 1976.

Steinmetz, Nicholas and John R. Hoey. "Hospital Emergency Room Utilization in Montreal Before and After Medicare." *Medical Care*, 16(2):133-139, February, 1978.

Steinwachs, Donald M. and Alvin I. Mushlin. "The Johns Hopkins Ambulatory Coding Scheme: A Problem Classification Scheme for Ambulatory Care." *Health Services Research*, 13(1):36-49, Spring, 1978.

Tessler, Richard and David Mechanic. "Factors Affecting Children's Use of Physician Services in a Prepaid Group Practice." *Medical Care*, 16(1):33-46, January, 1978.

Thacker, Stephen B., Carolee Osborne and Eva J. Salber. "Health Care Decision Making in a Southern County." *Journal of Community Health*, 3(4):347-356, Summer, 1978.

Thacker, Stephen B., et al. "Primary Health Care in an Academic Medical Center." *American Journal of Public Health*, 68(9):853-857, September, 1978.

Ullman, Ralph, James A. Block, Ned C. Boatright, and William C. Stratmann. "Impact of a Primary Care Group Practice on Emergency

Room Utilization at a Community Hospital." *Medical Care*, 16(9):723-729, September, 1978.

Warburton, Samuel W. and Georgia R. Sadler. "House Call Training in the Family Practice Curriculum." *Journal of Medical Education*. 52(9):768-770, September, 1977.

Williamson, Penelope, Julianne S. Oktay and Bernice Bennett. "Behavioral Scientists as Clinical Educators of Primary Care Practitioners." *Journal of Medical Education*, 53(3):191-197, March, 1978.

Wirth, Patricia, Lawrence Kahn and Etta Storm. "An Analysis of the Fifty Graduates of the Washington University Pediatric Nurse Practitioner Program." Parts I, II, and III. *The Nurse Practitioner*, 2(6):18-23, July-August, 1977; 2(7):14-17, September-October, 1977; 2(8):16-18, November-December, 1977.

Reports

Avery, Allyson Davies, et al. *Quality of Medical Care Assessment Using Outcome Measures: Eight Disease-Specific Applications*. R-2021/2-HEW. Santa Monica, California: The Rand Corporation, 1976.

Clarke, Gary and James Stearns (eds.). *Protection and Advocacy Systems for the Developmentally Disabled*. Washington, D.C.: Georgetown University Health Policy Center, 1977.

Colle, Ann D. and Michael Grossman. *Determinants of Pediatric Care Utilization*. NBER Working Paper 240. New York: National Bureau of Economic Research, 1978.

Craig, John. *The Disabled Aged: What Can Private Philanthropy Do?* Washington, D.C.: Georgetown University Health Policy Research Group, 1977.

Craig, John, et al. *Private Foundation Health Expenditures: A Survey Analysis*. Washington, D.C.: Georgetown University Health Policy Research Group, 1978.

Culley, Gregory A., et al. *The Effect of a Rural Preventive Health Program on Children's Use of Medical Care*. (Presentation at the 1977 Annual Meeting of the Ambulatory Pediatric Association), Hazard, Kentucky: Appalachian Regional Hospital, 1977.

DeTurk, David A. *Comprehensive Health Care in a Rural Group Practice*. Waterville, Maine: Waterville Osteopathic Hospital, 1977.

Dunn, David. *Summary and Comparison of Federal Hospital Cost Containment Proposals*. Washington, D.C.: Georgetown University Health Policy Center, 1977.

Durfee, M. F. "Changing Patterns of Health Care Needs." *Issues in the National Financing of Health Care*. (Committee Print). United States House Subcommittee on Health and the Environment. 94th Congress, 2nd session, November, 1976.

Emergency Medical Services at Midpassage. Washington, D.C.: National Academy of Sciences, 1978.

Fuchs, Victor R. *The Supply of Surgeons and the Demand for Operations*. NBER Working Paper 236. New York: National Bureau of Economic Research, 1978.

Gladstone, Robert J. *A Study to Determine the Impact of Emergency Medical System Regionalization*. WN-8950-RWJF. Santa Monica, California: Rand Corporation, 1975.

Hansen, Marc F. and Milton Seifert. *Development of "Laboratory Practice;" A Report to The Robert Wood Johnson Foundation*. Madison, Wisconsin: University of Wisconsin-Madison Center for Health Sciences, 1978.

Kalmans, Patricia A. *Medicaid Reimbursement of Community Health Centers*. Washington, D.C.: Georgetown University Health Policy Center, 1977.

Kohn, Margaret A., ed. *A State Survey of School Health Laws and Regulations and Health Service Requirements in Day Care Center*

Minimum Licensing Standards. Washington, D.C.: Center for Law and Social Policy, 1978.

Luehrs, John. *Long-Term Care in the States: Medicaid Expenditures and Reimbursement Policies*. Washington, D.C.: Georgetown University Health Policy Center, 1977.

A National Health Care Strategy. (A Series of Five Reports.) Washington, D.C.: The National Chamber Foundation, 1978.

Regional Emergency Medical Communications Systems. Washington, D.C.: National Academy of Sciences, 1978.

Rosinski, Edwin F. and Fred Dagenais. *Training for Primary Care: A Study of Nine Residency Programs Supported by The Robert Wood Johnson Foundation*. San Francisco: University of California—San Francisco, School of Medicine, 1978.

Scitovsky, Anne and Nelda N. Snyder. *Medical Care Use by a Group of Fully Insured Aged; A Case Study*. Hyattsville, Maryland: United States National Center for Health Services Research, 1975.

Silverman, Milton and Mia Lydecker. *Drug Coverage Under National Health Insurance: The Policy Options*. Hyattsville, Maryland: United States National Center for Health Services Research, 1977.

Smoldt, R. K. *HCSU Studies of Health Care in Rural Populations: An Analysis of the Utilization of Medical Care Services with Comments on Selected Marketing Issues and Community Satisfaction of Care*. Rochester, Minnesota: Mayo Clinic, 1978.

Spohn, Eric E., Lawrence R. Chiswell and David D. Davidson. *Final Report of the University of Kentucky Experimental Expanded Duties Dental Hygiene Project*. Lexington, Kentucky: University of Kentucky College of Allied Health Professions, 1976.

Audiovisual materials

The Community Hospital Program: An Overview. (35mm slides and audio cassette) by Eleanor Nealon. Princeton, New Jersey: The Robert Wood Johnson Foundation, 1978.

Portrait of a Rural Practice. (35mm slides and audio cassette) by William E. Walch. Princeton, New Jersey: The Robert Wood Johnson Foundation, 1978.

The Use and Function of Language in Medicine. (Series of eight audiotapes) by Eric J. Cassell. New York: Cornell University Medical College, 1978.

The Valentine Lane Family Practice: A Team Approach to Health Care. (16mm film) by Institute for Health Team Development, Montefiore Hospital and Medical Center. New York: Documents Associates, Inc., 1977.

Analysis of appropriations: 1972-1978

Analysis of Appropriations: 1972-1978

In 1972 The Robert Wood Johnson Foundation emerged as a national philanthropy with an overall goal to assist institutions and groups that are attempting to improve the American health care delivery system to make high-quality medical care more available for non-hospitalized Americans. Toward the achievement of this goal, three major objectives were defined:

- improving access to general health care services;
- improving the quality of health care, and the methods by which quality of care can be measured;
- improving the formulation and evaluation of public policy in health affairs.

In its first seven years as a national philanthropy, the Foundation made 1,093 grants, with appropriations totalling $318.5 million. The charts in this section show the use of these funds in relation to the Foundation's objectives, the proposals submitted to the Foundation, and the types of activities assisted in support of these objectives. The charts also depict the distribution of grants by geography and type of recipient, and the Foundation's grants in comparison with spending by other foundations and by the federal government.

All percentages and dollar amounts in the charts have been rounded.

Chart 1

Appropriations by RWJF Objectives, 1972-1978

RWJF 7-year appropriations: $318.5 million

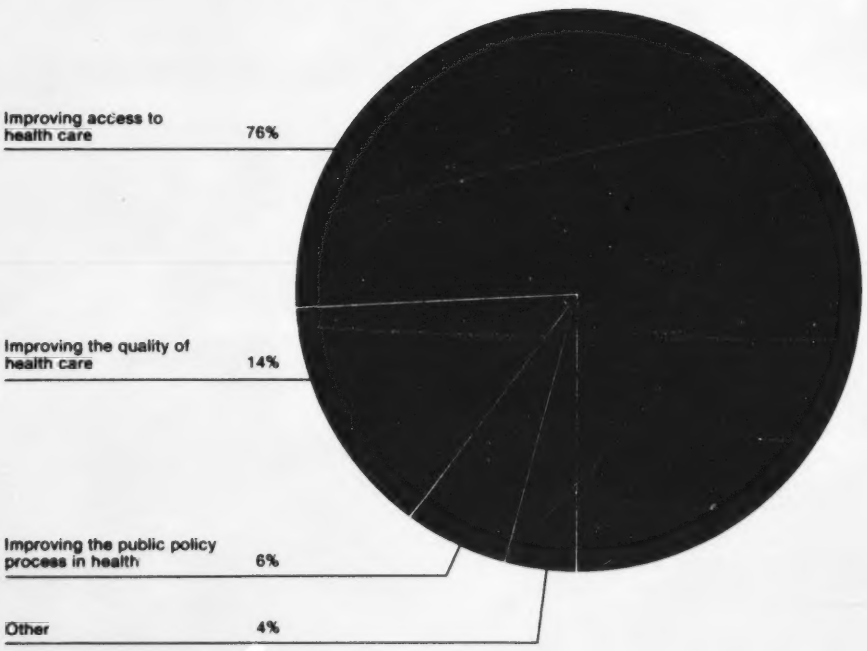


Chart 2

Types of Activities Supported, 1972-1978

RWJF 7-year appropriations: $318.5 million

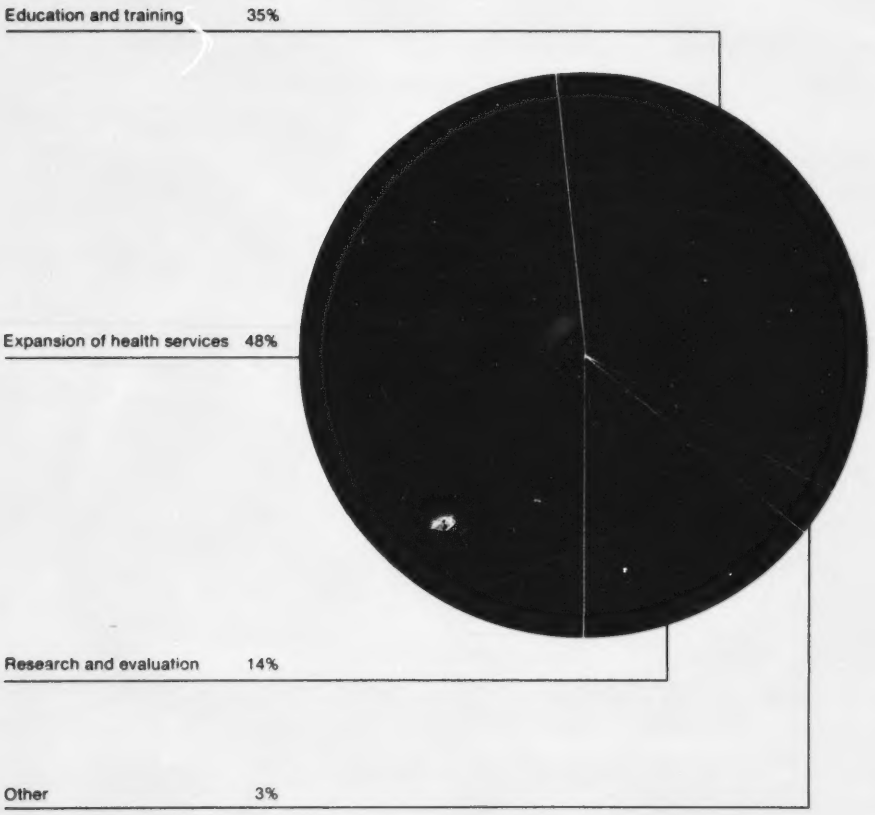


Chart 3

Types of Education and Training Programs Supported, 1972-1978

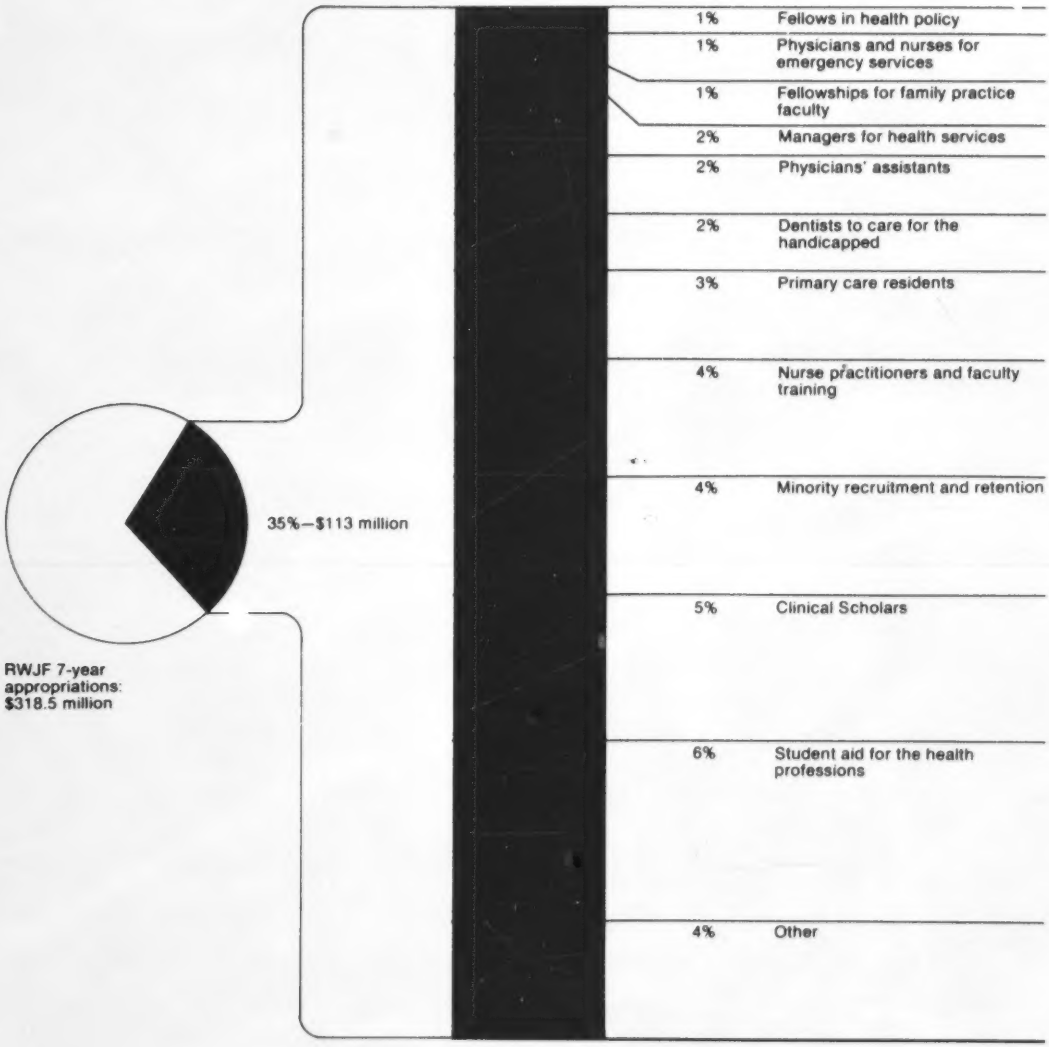

35%—$113 million
RWJF 7-year appropriations: $318.5 million
1% Fellows in health policy
1% Physicians and nurses for emergency services
1% Fellowships for family practice faculty
2% Managers for health services
2% Physicians' assistants
2% Dentists to care for the handicapped
3% Primary care residents
4% Nurse practitioners and faculty training
4% Minority recruitment and retention
5% Clinical Scholars
6% Student aid for the health professions
4% Other

Chart 4

Types of Programs Supported to Deliver Health Services, 1972-1978

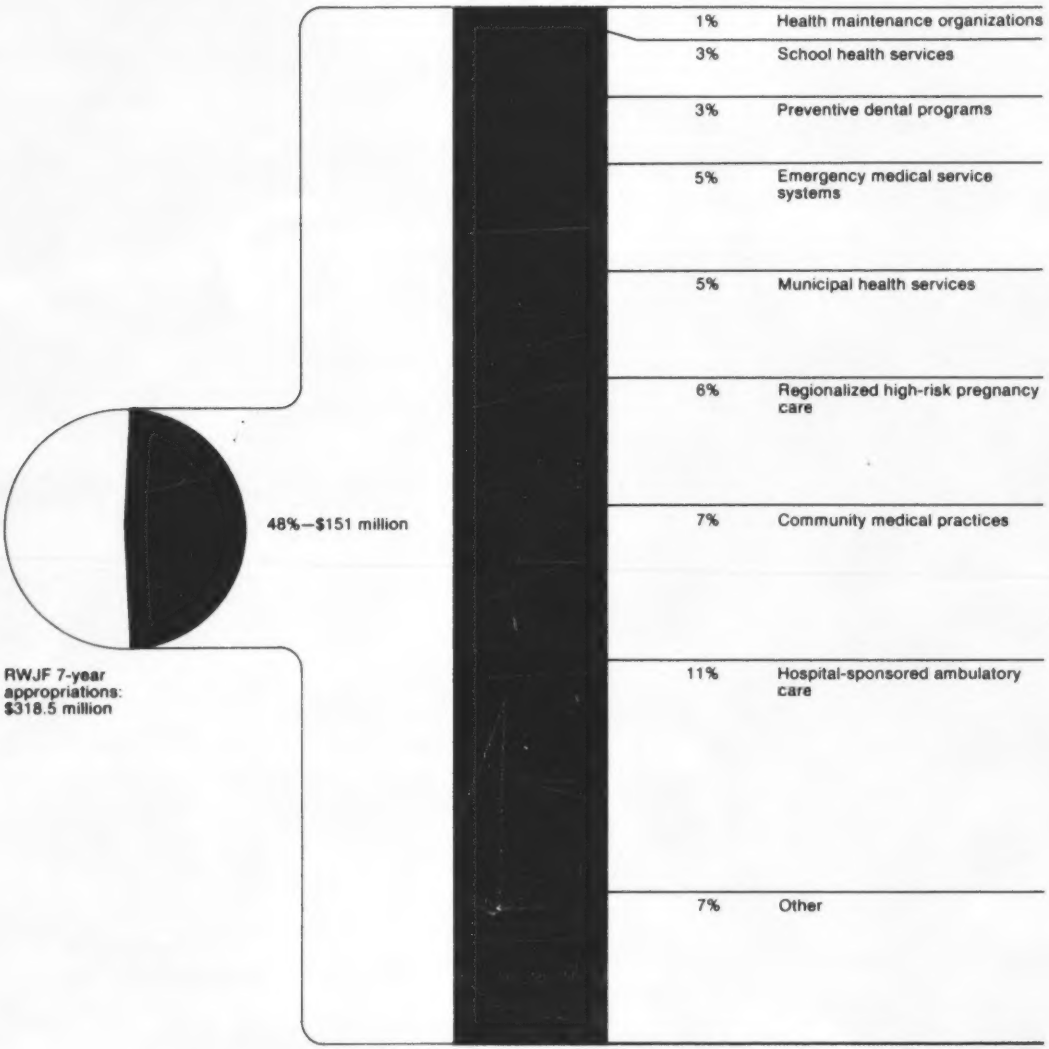


Chart 5

Types of Research and Evaluation Supported, 1972-1978

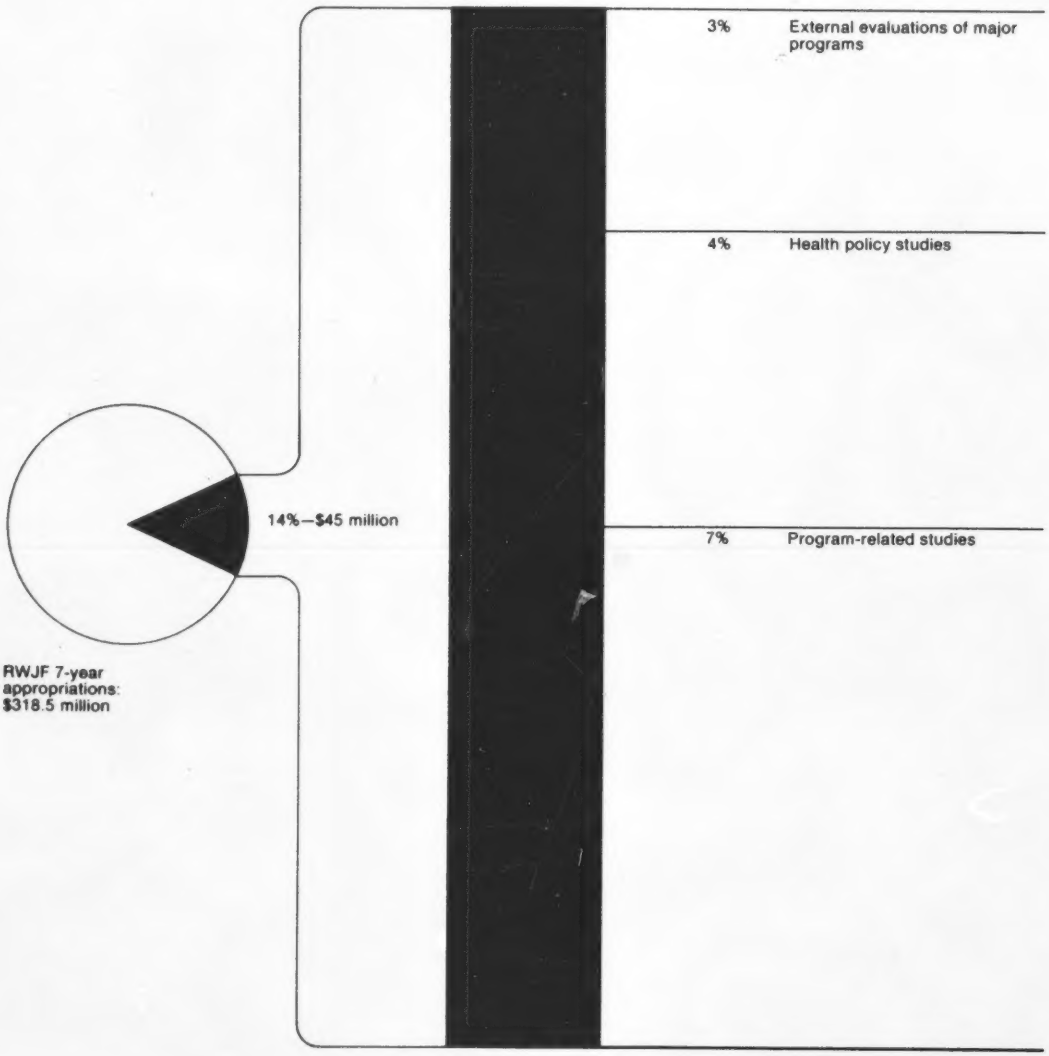

3% External evaluations of major programs
4% Health policy studies
7% Program-related studies
14%—$45 million
RWJF 7-year appropriations: $318.5 million

Chart 6A

Comparison of 1972-1978 Requests Received* to Appropriations: by Foundation Objectives

**Includes only those proposals for activities relevant to the Foundation's objectives.*

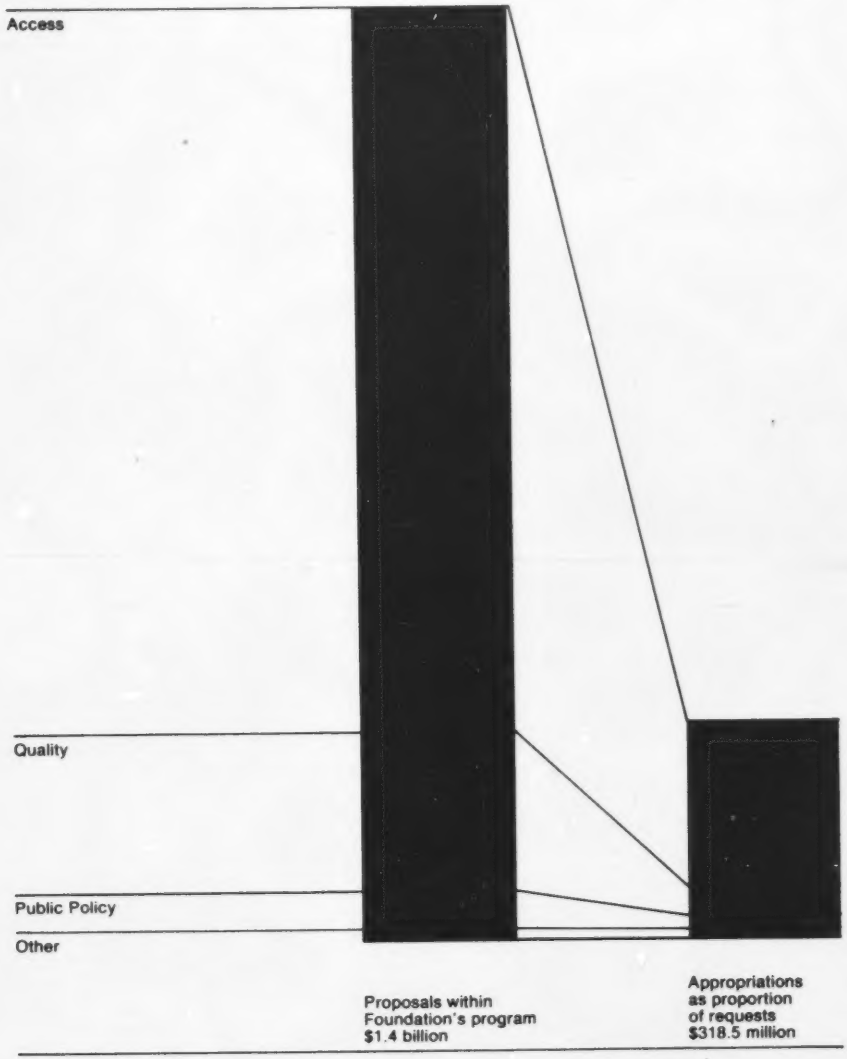


Chart 6B

Comparison of 1972-1978 Requests Received* to Appropriations: by Types of Activities Funded

**Includes only those proposals for activities relevant to the Foundation's objectives.*

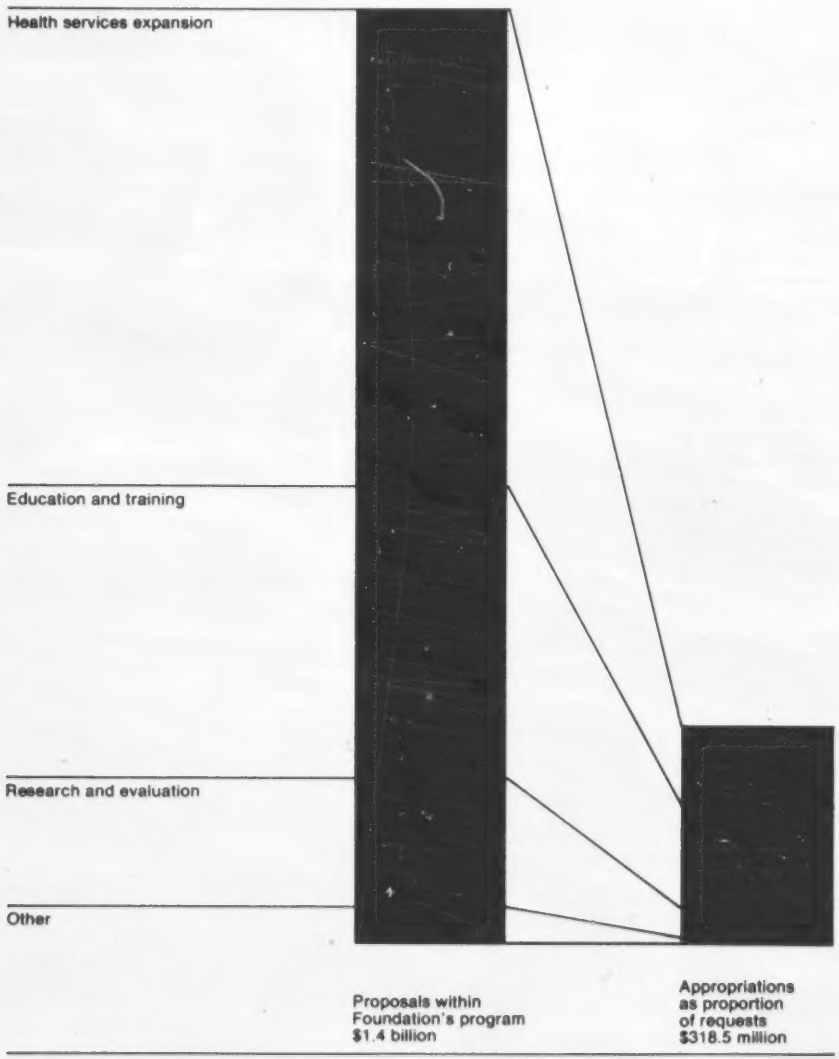


Chart 7

National Programs* as a Proportion of Appropriations 1972-1978

**Each of these programs comprises a series of grants assisting selected institutions or organizations addressing a specific, well-defined national problem within the scope of the Foundation's objectives.*

Percent of total appropriations	Dollars in millions	Percent of national programs	
3%	$10.4	6%	Evaluations
48%	150.9	94%	Programs

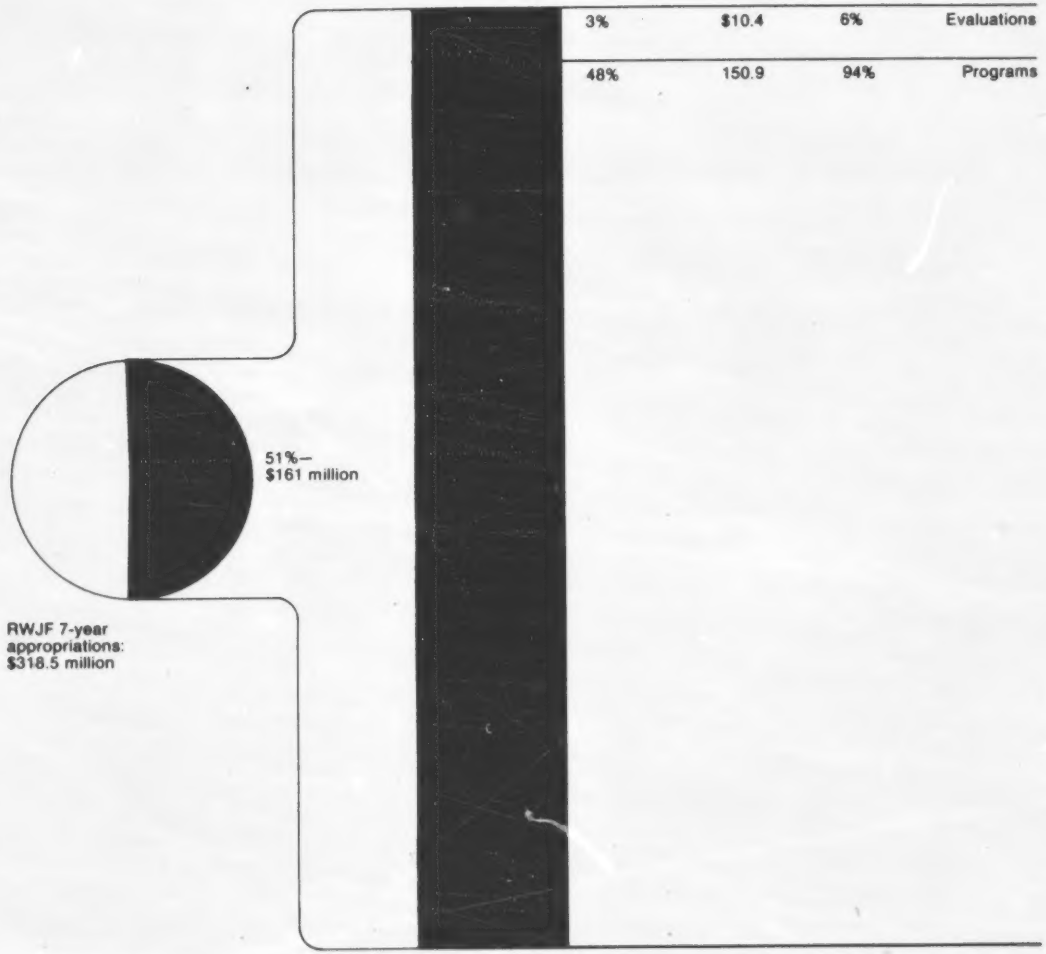


Chart 8

National Programs, 1972-1978

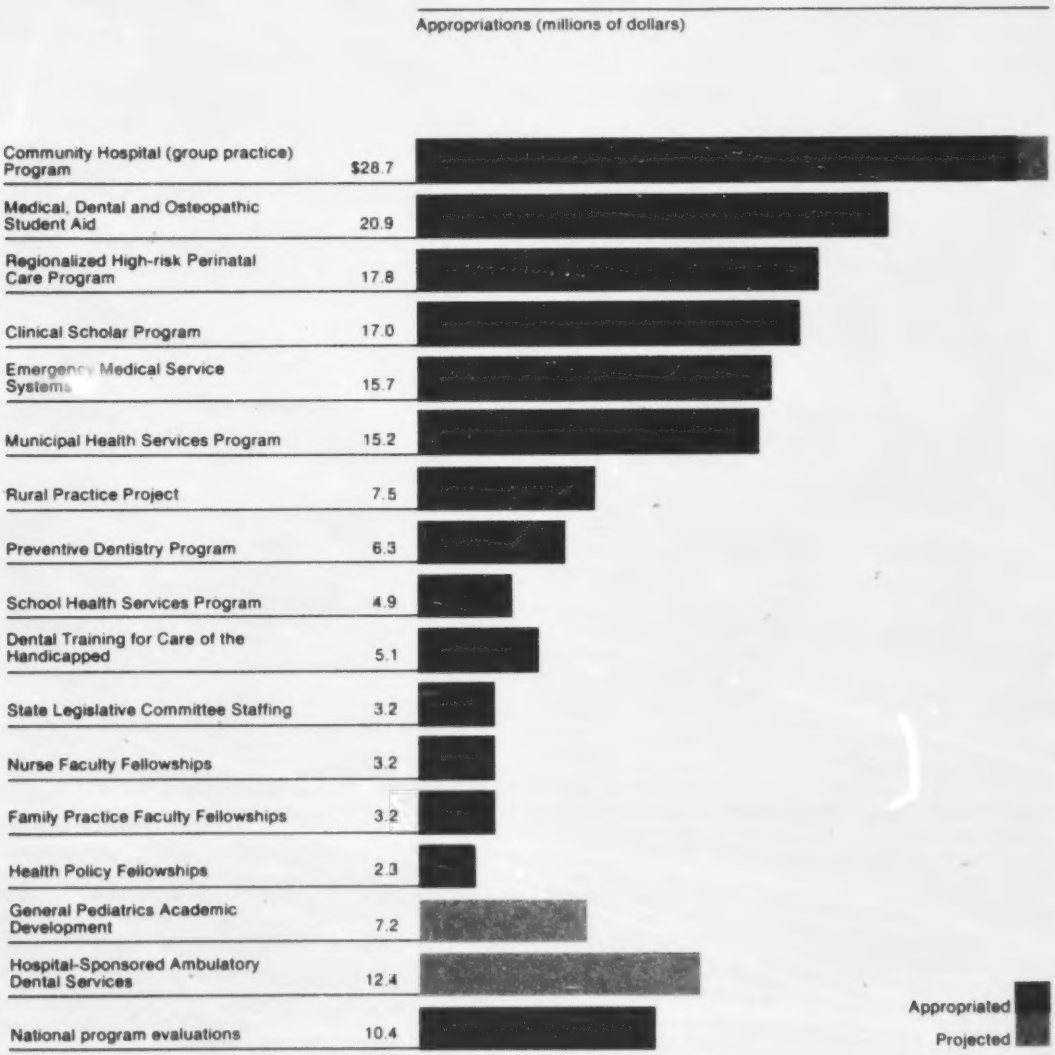
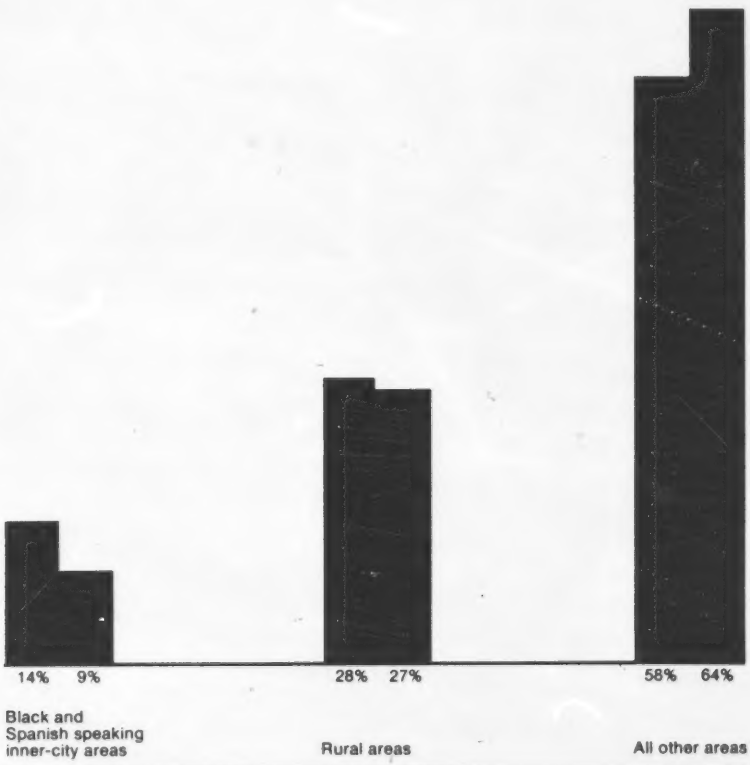


Chart 9

Service Programs for Inner-city Minority and Rural Populations, 1972-1978



RWJF health service appropriations—$151 million

U.S. population—203 million people

Chart 10

1972-1978 Appropriations by Geographical Regions Compared to Population

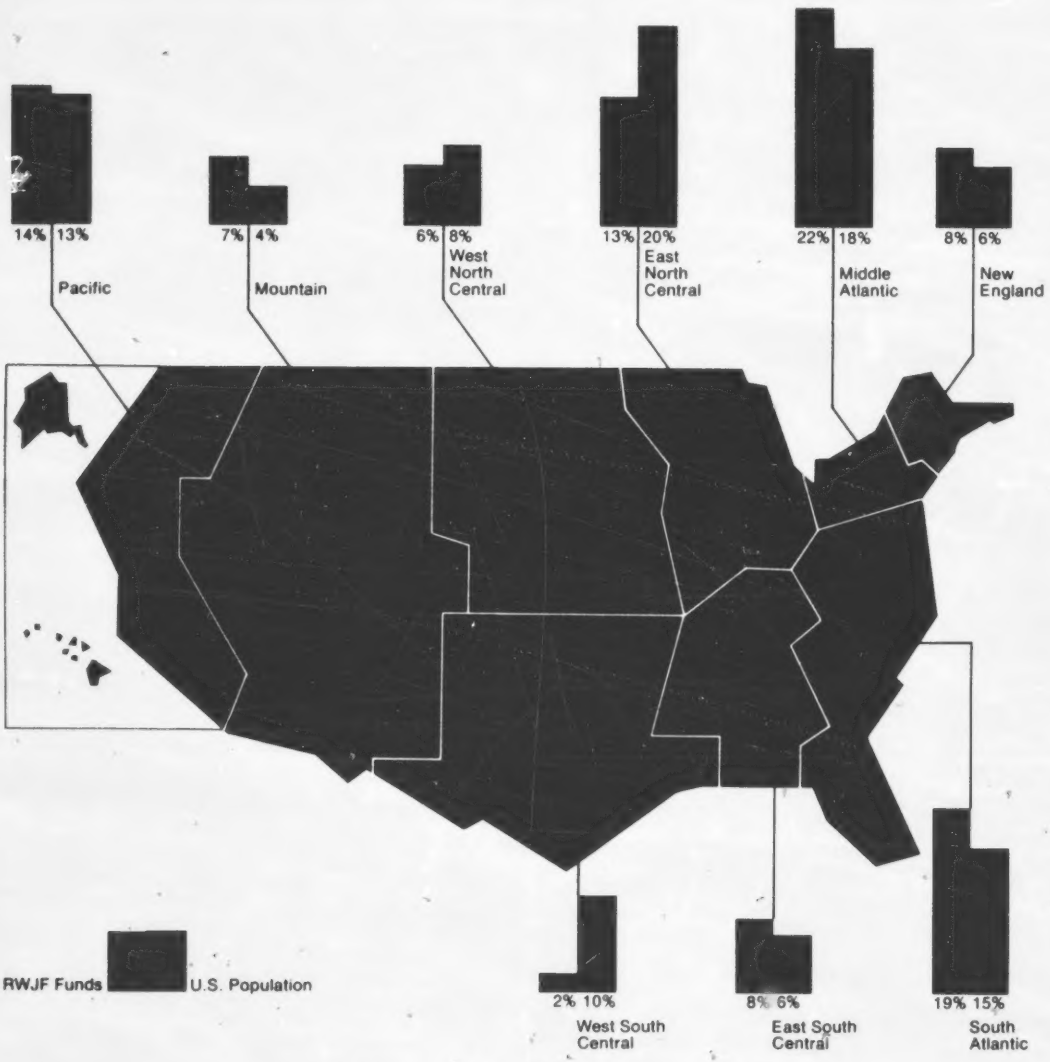


Chart 11

Appropriations for Programs in New Jersey, 1972-1978

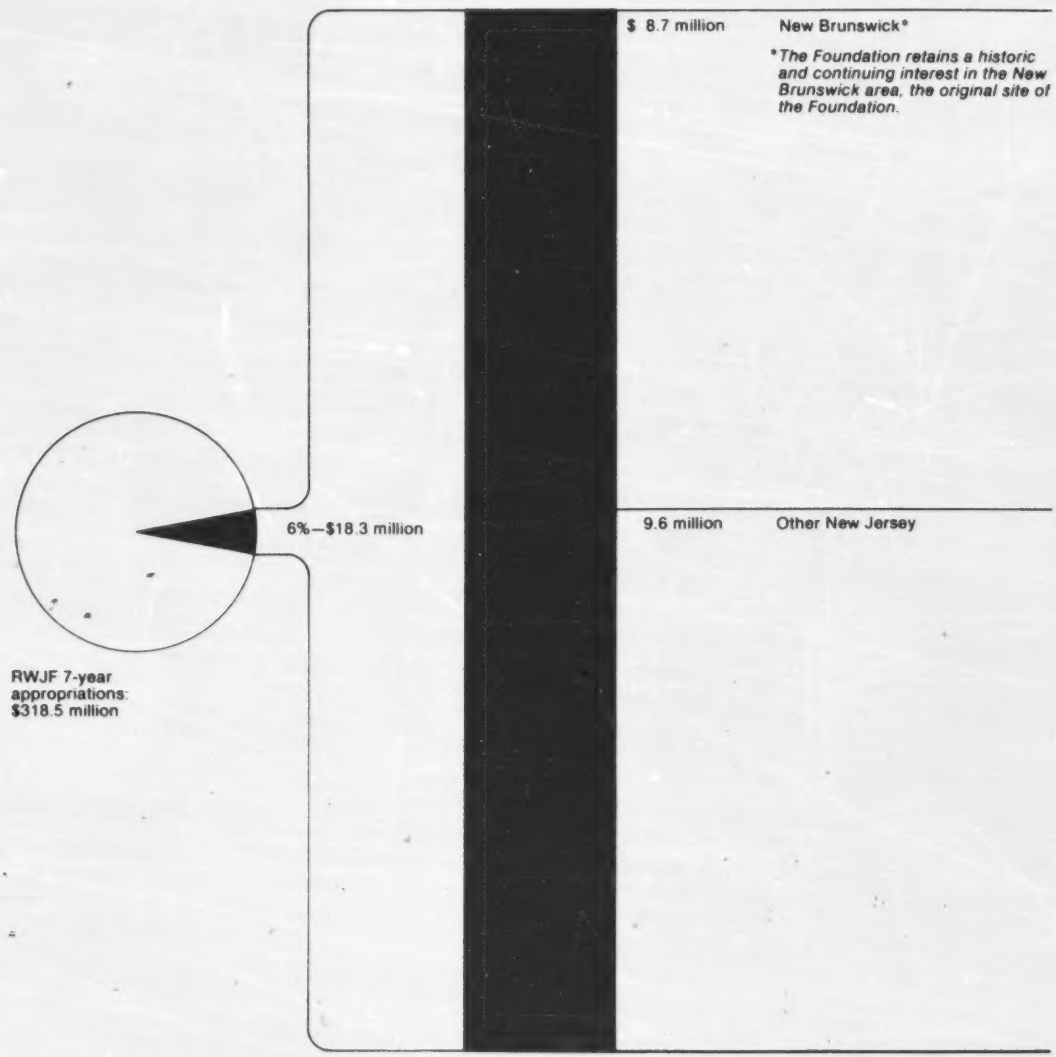

$ 8.7 million
New Brunswick*
*The Foundation retains a historic and continuing interest in the New Brunswick area, the original site of the Foundation.
6%—$18.3 million
9.6 million
Other New Jersey
RWJF 7-year appropriations: $318.5 million

Chart 12

Division of Appropriations Between Public and Private Institutions, 1972-1978

RWJF 7-year appropriations: $318.5 million

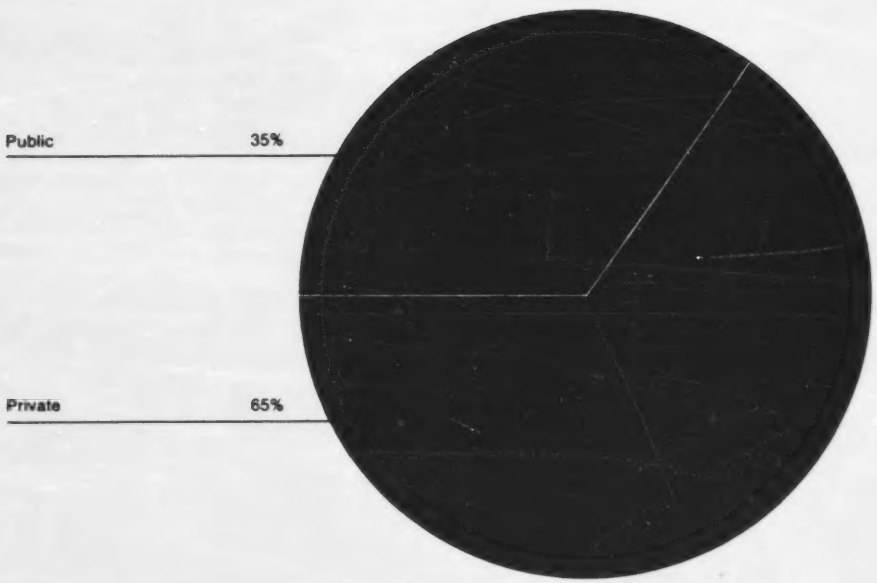


Chart 13

Types of Institutions Receiving Support, 1972-1978

	Number of institutions	Percent of dollars appropriated	RWJF 7-year appropriations: $318.5 million
Academic health science centers	125	49%	
Community and state health agencies	78	14%	
Community hospitals	66	11%	
National organizations	36	6%	
Independent research groups	33	6%	
Community clinics	35	5%	
Other universities and colleges	22	3%	
Major teaching hospitals	17	3%	
Other	14	3%	

Chart 14

RWJF Appropriations Compared to Federal Health Expenditures by Types of Activity Supported, 1972-1978

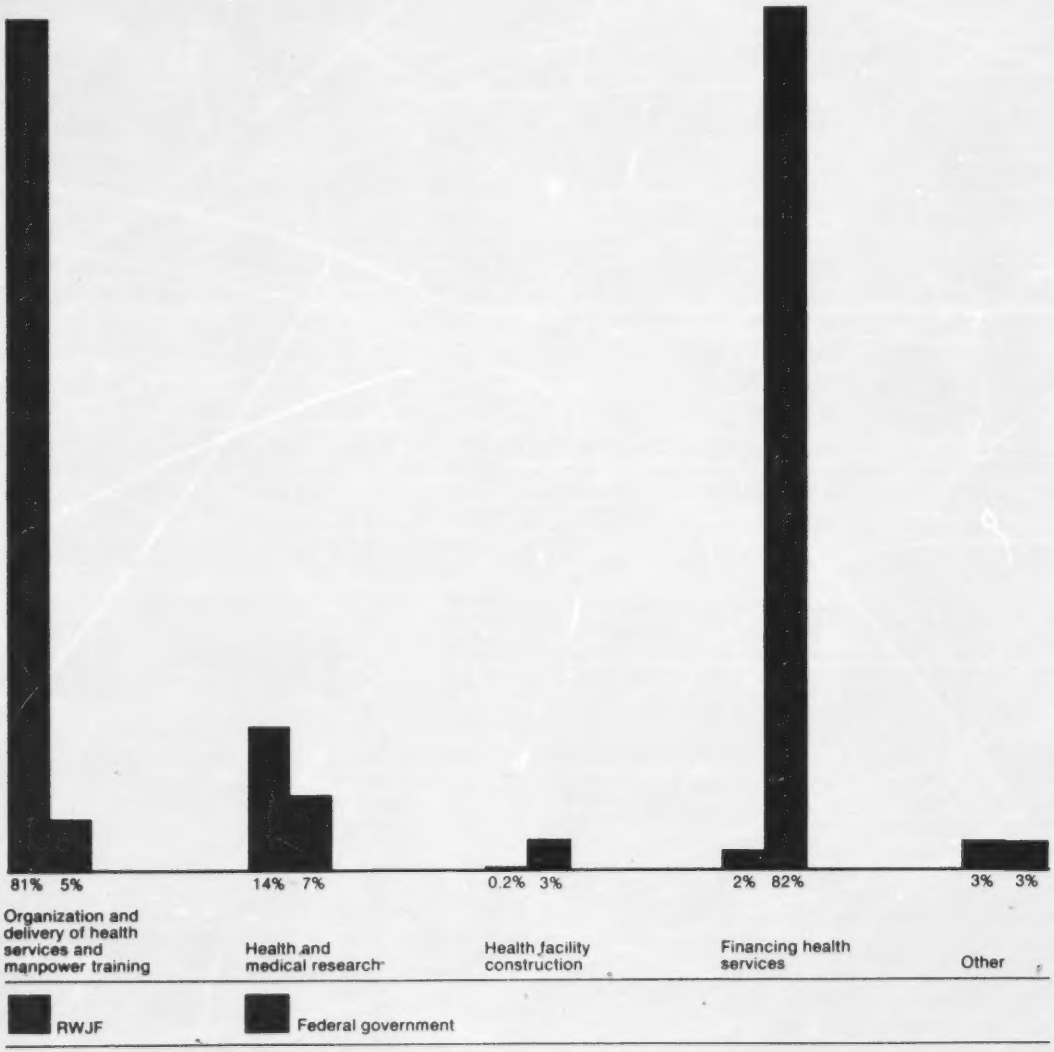


Chart 15

RWJF Appropriations Compared to Health Expenditures by Other Foundations and the Federal Government, 1976*

**Data on other foundations' health expenditures are only available for 1976.*